

# 2010 Catalog



## High-Rel Discrete Semiconductors Assembly Products

**Semtech's Strategy in Discrete Products** is to supply devices, either in axial, surface-mount or custom assembly configurations, that are rugged in design and in packages that are both hermetic and varied in their overall function and construction.

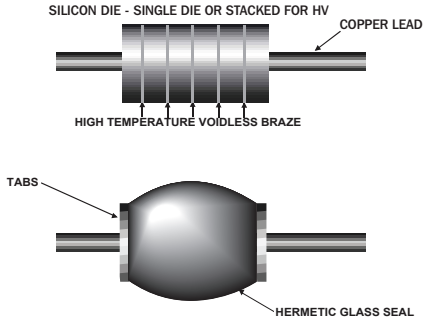
These products range from single to multi-phase devices in high-current/high-voltage configurations. Among their uses are power supplies, base stations, motor drives, and medical equipment. Custom devices are available.

Axial Rectifiers	
PART NUMBERS	DESCRIPTION
1N5415 through 1N5420	Fast recovery axial rectifier, 50V - 600V, $I_o=4.5A$
1N5550 through 1N5554	Standard recovery axial rectifier, 200V - 1000V, $I_o=5.0A$
1N5614, 1N5616, 1N5618, 1N5620, 1N5622	Standard recovery axial rectifier, 200V - 1000V, $I_o=2.0A$
1N5615, 1N5617, 1N5619, 1N5621, 1N5623	Fast recovery axial rectifier, 200V - 1000V, $I_o=2.0A$
1N5802, 1N5804, 1N5806	Superfast axial rectifier, 50V - 150V, $I_o=2.5A$
1N5807, 1N5809, 1N5811	Superfast axial rectifier, 50V - 150V, $I_o=6.0A$
1N6073, 1N6074, 1N6075	Superfast axial rectifier, 50V - 150V, $I_o=1.8A$
1N6076, 1N6077, 1N6078	Superfast axial rectifier, 50V - 150V, $I_o=3.1A$
1N6079, 1N6080, 1N6081	Superfast axial rectifier, 50V - 150V, $I_o=5.0A$
USC1104, USC1105, USC1106	Superfast axial rectifier, 200V - 400V, $I_o=2.1A$
USC1304, USC1305, USC1306	Superfast axial rectifier, 200V - 400V, $I_o=5.0A$
2T2KF	Fast recovery rectifier diode, 2000V, $I_o = 2A$ , $t_{rr}=150ns$
2T2K	Standard recovery rectifier diode, 2000V, $I_o=2A$
Surface Mount Devices	
1N5802US, 1N5804US, 1N5806US	Superfast surface-mount rectifier, 50V - 150V, $I_o=2.5A$
1N5807US, 1N5809US, 1N5811US	Superfast surface-mount rectifier, 50V - 150V, $I_o=6.0A$
1N6102AUS, 1N6137AUS	500W surface-mount bi-polarity transient voltage suppressors
1N6138AUS, 1N6173AUS	1500W surface-mount bi-polarity transient voltage suppressors
Zener Voltage Regulators	
1N4954 through 1N4990	Axial leaded and surface mount 5W Zener voltage regulators
1N4460 through 1N4496	Axial leaded and surface mount 1.5W Zener voltage regulators
High Voltage Assemblies	
SCF2500, SCF5000, SCF7500, SCF10000, SCF12500	Fast recovery high-voltage rectifier assemblies, 2500V - 12500V, 500mA
SCFS2000, SCFS4000, SCFS6000, SCFS8000, SCFS10000, SCFS12000	Fast recovery high-voltage rectifier assemblies, 2000V - 12000V, 1.5A
SCH5000, SCH7500, SCH10000, SCH12500, SCH15000, SCH20000, SCH25000	Standard recovery high-voltage rectifier assemblies, 5000V - 20000V, 500mA
SCHJ15K, SCHJ30K, SCHJ45K, SCHJ22.5K, SCHJ37.5K	Standard recovery high-voltage rectifier assemblies, 15000V - 45000V, 50mA
SCHS2500, SCHS5000, SCHS7500, SCHS10000, SCHS12500, SCHS15000	Standard recovery high-voltage rectifier assemblies, 2500V - 15000V, 2.0A
SCKV100K3, SCKV150K3, SCKV200K3	Standard recovery high-voltage rectifier assemblies, 100000V - 200000V, 100mA
SCKV12K30, SCKV18K30, SCKV25K30	Standard recovery high-voltage rectifier assemblies, 12000V - 25000V, 1.0A
SCKV12K40, SCKV18K40, SCKV25K40	Standard recovery high-voltage rectifier assemblies, 12000V - 25000V, 2.0A
SCKV30K12F, SCKV45K12F, SCKV60K12F	Fast recovery high-voltage rectifier assemblies, 30000V - 60000V, 200mA
SDH5KM, SDH10KM, SDH15KM	Standard recovery high-voltage rectifier assemblies, 5000V - 15000V, 1A
SDH5KS, SDH10KS	Standard recovery high-voltage rectifier assemblies, 5000V - 10000V, 2.5A
SDH7.5K, SDH15K	Standard recovery high-voltage rectifier assemblies, 7500V - 15000V, 400mA
SDHF2.5KM, SDHF5KM, SDHF7.5KM	Fast recovery high-voltage rectifier assemblies, 2500V - 7500V, 1A
SDHF2.5KS, SDHF5KS	Fast recovery high-voltage rectifier assemblies, 2500V - 5000V, 2.5A
S6HVM20, S6HVM25, S6HVM30	Standard Recovery, high voltage rectifier assembly
1-Phase Devices	
SBM*2 through SBM*0	Standard recovery 1-phase silicon bridge rectifier assembly, 200V - 1000V, 1.5A
SBR05 through SBR30	Standard recovery 1-phase silicon bridge rectifier assembly, 50V - 3000V, 0.36A - 1.5A
SBR05F through SBR25F	Fast recovery 1-phase silicon bridge rectifier assembly, 50V - 2500V, 0.36A - 1.0A
SBR05FF, SBR10FF, SBR15FF	Superfast recovery 1-phase silicon bridge rectifier assembly, 50V - 150V, 1.0A
SCAJ05F, SCAJ1F, SCAJ2F, SCAJ4F, SCAJ6F	Fast recovery 1-phase full-wave bridge, 50V - 600V, 4.5A
SCAJ05FF, SCAJ10FF, SCAJ15FF	Superfast recovery 1-phase full-wave bridge, 50V - 150V, 5A
SCAJ2, SCAJ4, SCAJ6	Standard recovery 1-phase full-wave bridge, 200V - 600V, 5A
SCAS05, SCAS1, SCAS2, SCAS4, SCAS6	Standard recovery 1-phase full-wave bridge, 50V - 600V, 70A
SCAS05F, SCAS1F, SCAS2F, SCAS4F	Fast recovery 1-phase full-wave bridge, 50V - 400V, 65A
SCAS05FF, SCAS10FF, SCAS15FF	Superfast recovery 1-phase full-wave bridge, 50V - 150V, 20A
SCBA2, SCBA4, SCBA6	Standard recovery 1-phase full-wave bridge, 200V - 600V, 25A
SCBAR05, SCBAR1, SCBAR2, SCBAR4, SCBAR6, SCBAR8, SCBAR10	Standard recovery 1-phase full-wave bridge, 50V - 1000V, 53A
SCBAR05F, SCBAR1F, SCBAR2F, SCBAR4F	Fast recovery 1-phase full-wave bridge, 50V - 400V, 50A
SCBAR05FF, SCBAR10FF, SCBAR15FF	Superfast recovery 1-phase full-wave bridge, 50V - 150V, 55A

TVS Devices	
PART NUMBERS	DESCRIPTION
1N6102 through 1N6137	500W axial bi-polarity transient voltage suppressors
1N6102A, 1N6137A	500W axial bi-polarity transient voltage suppressors
1N6138 through 1N6173	1500W axial bi-polarity transient voltage suppressors
1N6138A, 1N6173A	1500W axial bi-polarity transient voltage suppressors
1N6461, 1N6468	500W axial uni-junction transient voltage suppressors
1N6469, 1N6476	500W axial uni-junction transient voltage suppressors
6OKS200C	60000W TVS bi-directional module, 200V
704-15K36, 704-15K36T	15000W uni-directional TVS module, 28V
9OKS200C	90000W TVS bi-directional module, 200V
3-Phase Assemblies	
SC3BA05, SC3BA1, SC3BA2, SC3BA4, SC3BA6	Standard recovery 3-phase full-wave bridge, 50V - 600V, 18A
SC3BA05F, SC3BA1F, SC3BA2F, SC3BA4F	Fast recovery 3-phase full-wave bridge, 50V - 400V, 15A
SC3BA05FF, SC3BA10FF, SC3BA15FF	Superfast recovery 3-phase full-wave bridge, 50V - 150V, 17A
SC3BH05, SC3BH1, SC3BH2, SC3BH4, SC3BH6	Standard recovery 3-phase full-wave bridge, 50V - 600V, 10A
SC3BH05F, SC3BH1F, SC3BH2F, SC3BH4F	Fast recovery 3-phase full-wave high-current bridge, 50V - 400V, 9A
SC3BH05FF, SC3BH10FF, SC3BH15FF	Superfast recovery 3-phase full-wave bridge, 50V - 150V, 12A
SC3BJ05, SC3BJ1, SC3BJ2, SC3BJ4, SC3BJ6	Standard recovery 3-phase full-wave bridge, 50V - 600V, 5A
SC3BJ05F, SC3BJ1F, SC3BJ2F, SC3BJ4F, SC3BJ6F	Fast recovery 3-phase full-wave bridge, 50V - 400V, 5A
SC3BJ05FF, SC3BJ10FF, SC3BJ15FF	Superfast recovery 3-phase full-wave bridge, 50V - 150V, 5A
SC3BK05, SC3BK1, SC3BK2, SC3BK4, SC3BK6	Standard recovery 3-phase full-wave high-current bridge, 50V - 600V, 38A
SC3BK05F, SC3BK1F, SC3BK2F, SC3BK4F	Fast recovery 3-phase full-wave high-current bridge, 50V - 400V, 42A
SC3BK05FF, SC3BK10FF, SC3BK15FF	Superfast recovery 3-phase full-wave high-current bridge, 50V - 150V, 38A
High Current ISOPAC@s (Non Epoxied)	
SET010203, SET010204, SET010211, SET010212, SET010219	ISOPAC® ministud high-current rectifier assemblies, 150V - 1000V, 15A
SET040203, SET040204, SET040211, SET040212, SET040219	ISOPAC® D04 stud high-current rectifier assemblies, 150V - 1000V, 30A
SET050203, SET050204, SET050211, SET050212, SET050219	ISOPAC® D05 stud high-current rectifier assemblies, 150V - 1000V, 30A
SET100203, SET100204, SET100211, SET100212, SET100219	ISOPAC® D05 stud high-current rectifier assemblies, 150V - 1000V, 90A
High Voltage Capacitors	
High voltage ceramic capacitors (2EXYYYYK1- 6EXYYYYK5)	Ceramic capacitors, 1000V - 5000V, various capacitance values
Doublers and Center Taps	
SCDA05 through SCDA6, SCNA05 through SCNA6, SCPA05 through SCPA6	Standard recovery doublers and center taps, 50V - 600V, 15A
SCDA05F through SCDA4F, SCNA05F through SCNA4F, SCPA05F through SCPA4F	Fast recovery doublers and center taps, 50V - 400V, 15A
SCDA05F through SCDA4F, SCNA05F through SCNA4F, SCPA05F through SCPA4F	Fast recovery doublers and center taps, 50V - 400V, 15A
SCDAR05, SCDAR10, SCNAR05, SCNAR10, SCPAR05, SCPAR10	Standard recovery doublers and center taps, 50V - 1000V, 45A
SCDAR05F, SCDAR4F, SCNAR05F, SCNAR4F, SCPAR05F, SCPAR4F	Fast recovery doublers and center taps, 50V - 400V, 45A
SCDAR05FF, SCDAR15FF, SCNAR05FF, SCNAR15FF, SCPAR05FF, SCPAR15FF	Superfast recovery doublers and center taps, 50V - 150V, 45A
SCDAS05, SCDAS6, SCNAS05, SCNAS6, SCPAS05, SCPAS6	Standard recovery doublers and center taps, 50V - 600V, 85A
SCDAS05F, SCDAS4F, SCNAS05F, SCNAS4F, SCPAS05F, SCPAS4F	Fast recovery doublers and center taps, 50V - 400V, 85A
SCDAS05FF, SCDAS15FF, SCNAS05FF, SCNAS15FF, SCPAS05FF, SCPAS15FF	Superfast recovery doublers and center taps, 50V - 150V, 85A
SCPND5, SCPND15, SCPNN5, SCPNN15, SCPNP5, SCPNP15	Standard recovery high-voltage doublers and center taps, 5000V - 15000V, 11A
SCS*FF05L, SCS*FF10L, SCS*FF15L	Superfast recovery high-current doublers and center taps, 50V - 150V, 150A
SCSDF4L, SCSNF4L, SCSPF4L	Fast recovery high-current doubler and center taps, 400V, 150A
SCSDM0L, SCSNM0L, SCSPM0L	Standard recovery high-current doubler and center taps, 1000V, 150A
SDHD5KM, SDHD15KM, SDHN5KM, SDHN15KM, SDHP5KM, SDHP15KM	Standard recovery high-voltage doublers and center taps, 5000V - 15000V, 2A
SDHD5KS, SDHD10KS, SDHN5KS, SDHN10KS, SDHP5KS, SDHP10KS	Standard recovery high-voltage doublers and center taps, 5000V - 10000V, 5A
SDHD7.5K, SDHD15K, SDHN7.5K, SDHN15K, SDHP7.5K, SDHP15K	Standard recovery high-voltage doublers and center taps, 7500V - 15000V, 800mA
SET03**03, SET03**04, SET03**11, SET03**12, SET03**19	ISOPAC® high-current doublers and center taps, 150V - 1000V, 15A

High-Current Assemblies	
PART NUMBERS	DESCRIPTION
S2KW8KA-1, S2K16WKA-2, S2KW24KA-3, S2KW32KA-4, S2KW40KA-5, S2KW48KA-6	Standard recovery high-current rectifier assembly 8kV - 48kV, 7.5A-10A
S4KW4KA-1, S4KW8KA-2, S4KW12KA-3, S4KW16KA-4, S4KW20KA-5, S4KW24KA-6	Standard recovery high-current rectifier assembly 4kV - 24kV, 8A-20A
SCSF05, SCSF1, SCSF2, SCSF4, SCSF0	Fast recovery high-current rectifier assembly, 50V - 1000V, 120A
SCSFF05, SCSFF10, SCSFF15	Superfast recovery high-current rectifier assembly, 50V - 150V, 120A
SCSM05, SCSM1, SCSM2, SCSM4, SCSM6, SCSM8, SCSM0	Standard recovery high-current rectifier assembly, 50V - 1000V, 150A

## Package Styles



Typical High Voltage Rectifier



Finpac-High Current



DO-4 Stud ISOPAC®



Center Tap



Doubler



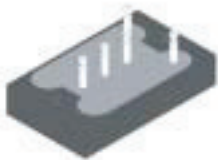
1-Phase Bridge



1-Phase Bridge ISOPAC®



3-Phase Bridge ISOPAC®



3-Phase Bridges



Slim Pac - High Voltage

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