II. Schottky Rectifier

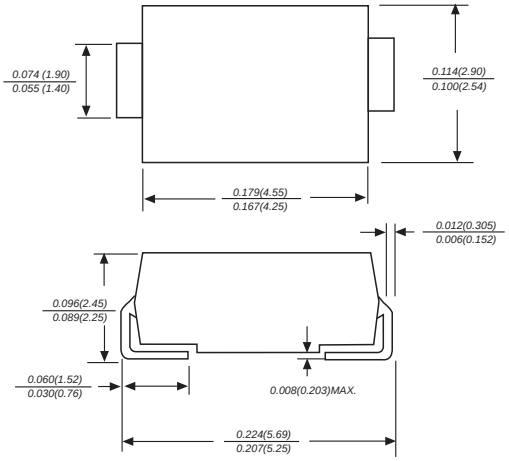
5.0A Surface Mount Schottky Rectifier
S52~S520 (Package: SMA (DO-214AC))

FEATURES

- For surface mounted applications
- Low profile leakage
- Built-in strain relief
- Easy pick and place
- Plastic material used carries Underwriters Laboratory Classification 94V-0
- Extremely low V_F
- Majority carrier conduction
- High temperature soldering : 260℃/10 seconds at terminals

MECHANICAL DATA

- Case : DO-214AC molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Lead : Pure tin plated, lead free



Case: SMA
Dimensions in inches and (millimetres)

Ratings & Electrical Characteristics

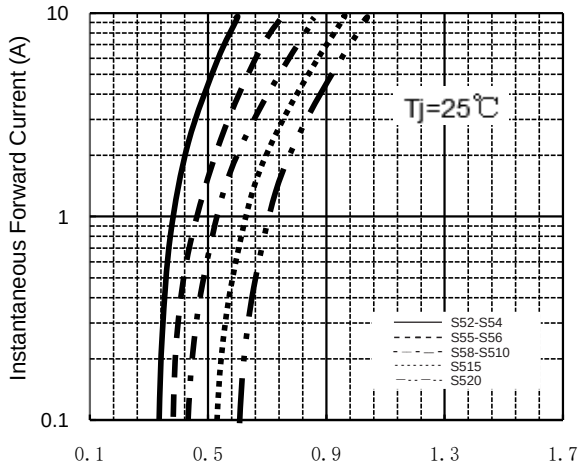
Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	S52	S53	S54	S55	S56	S58	S510	S515	S520	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current	Io	5.0									Amps
Non-repetitive peak forward surge current 8.3ms single half sine-wave	I_{FSM}	125.0									Amps
Maximum forward voltage at 5.0A	V_F	0.55			0.70		0.85		0.92	0.95	Volts
Maximum reverse current Ta = 25℃	I_R	0.5					0.1				mA
Ta = 100℃		20.0					10.0				
Typical thermal resistance (Note 1)	Rth-JA Rth-JL	105 35									℃/w
Typical junction capacitance V_R = 4.0V, f = 1MHz	Cj	300									PF
Operating junction temperature range	Tj	-55 to +125					-55 to +150				℃
Storage temperature range	Tstg	-55 to +150									℃

Notes:
1. Thermal resistance from junction to ambient, PCB mounted.

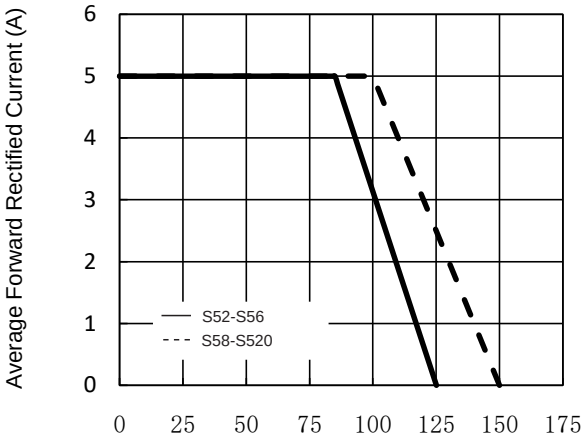
Ratings and Characteristic Curves of S52~S520

TYPICAL FORWARD CHARACTERISTICS



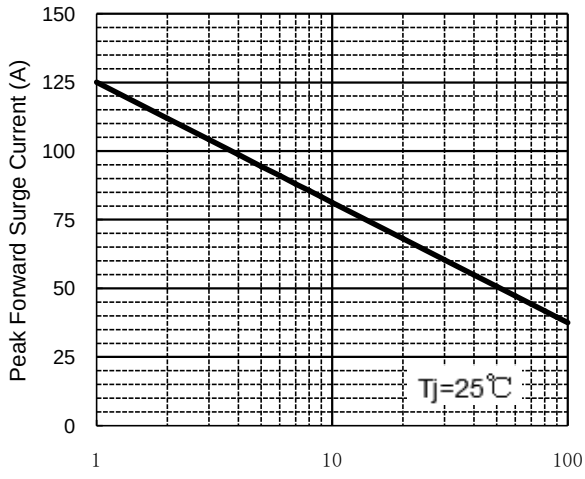
V_F Instantaneous Forward Voltage (V)

FORWARD CURRENT DERATING CURVE



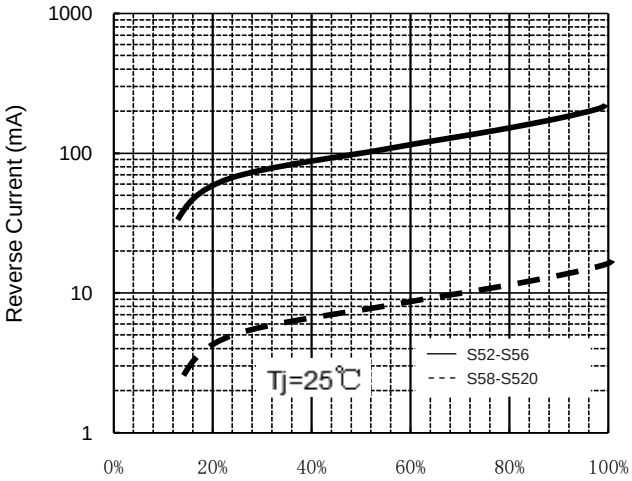
Tamb, Ambient Temperature (°C)

MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT



Number of Cycles at 60 Hz.

TYPICAL REVERSE CHARACTERISTICS



Percent of Rated Peak Reverse voltage %