

Surface Mount General Purpose Rectifier

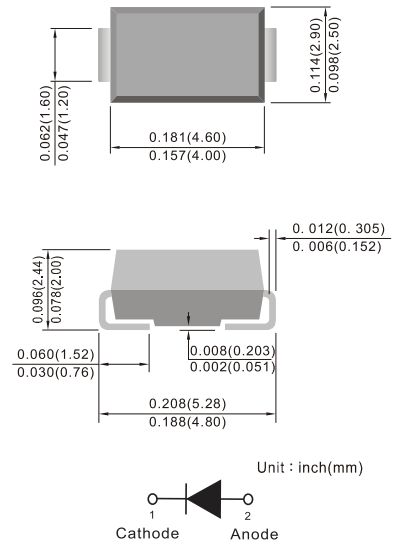
Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Data

- **Package:** DO-214AC (SMA)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

DO-214AC (SMA)



Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	M520
Maximum Repetitive Peak Reverse Voltage	VRRM	V	2000
Maximum RMS Voltage	VRMS	V	1400
Maximum DC blocking Voltage	VDC	V	2000
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _O	A	1
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	30
Current squared time @1ms≤t≤8.3ms T _j =25°C	I ² t	A ² s	3.735
Storage temperature	T _{stg}	°C	-55 ~ +150
Junction temperature	T _j	°C	-55 ~ +150

Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	M520
Maximum instantaneous forward voltage	V _F	V	I _{FM} =1.0A	1.1
Maximum DC reverse current at rated DC blocking voltage	I _R	μA	T _j =25°C	2
			T _j =125°C	100
Typical junction capacitance	C _j	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	7

Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	M520
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	$^\circ\text{C/W}$	70
	$R_{\theta J-L}^{(1)}$		25
	$R_{\theta J-C}^{(1)}$		15

Note
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Characteristics (Typical)

FIG.1: Io-TL Curve

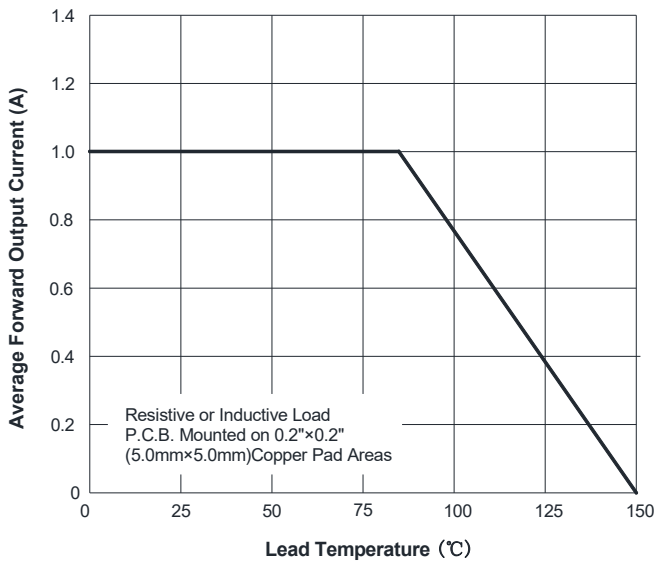


FIG.2: Forward Surge Current Capability

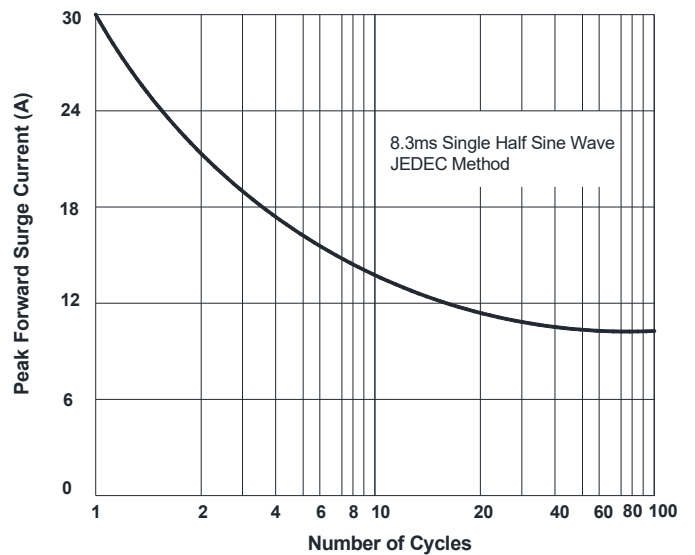


FIG.3: Typical Forward Voltage

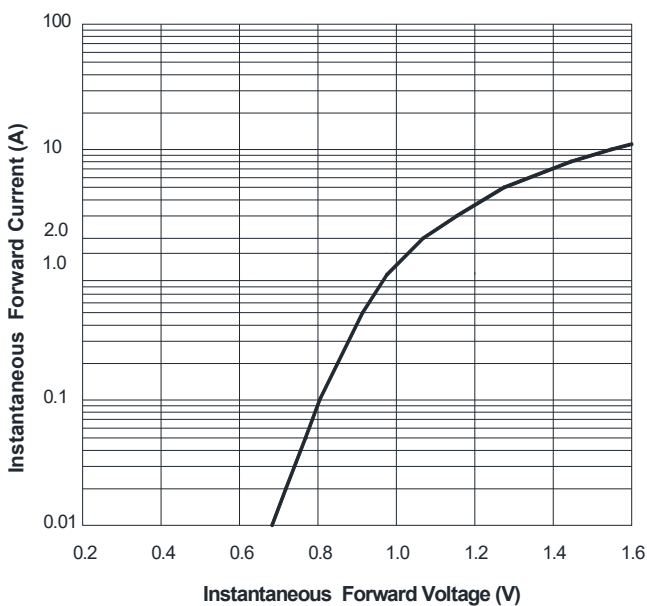


FIG.4: Typical Reverse Characteristics

