Elektronische Bauelemente

MD102S ~ MD107S

Voltage 100V ~ 1000V

1.0 Amp Surface Mount Bridge Rectifiers

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Plastic material has UL flammability classification 94V-0
- High surge current capability
- Saves space on printed circuit boards
- Glass passivated structure

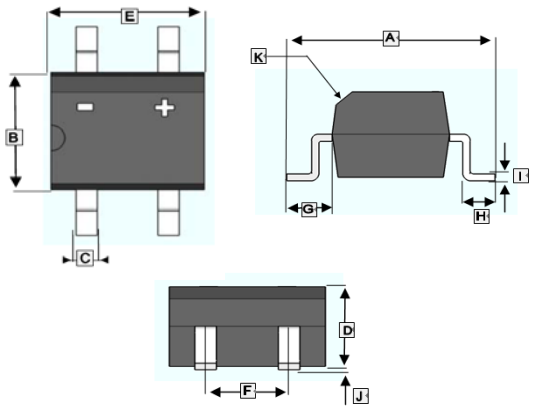
MECHANICAL DATA

- Case: Molded plastic body over passivated junctions
- Polarity: As marked on body
- Mounting position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
MDS	2.5K	13 inch

MDS



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	-	7.0	G	1.3	1.7
B	3.6	4.2	H	0.7	1.1
C	0.5	0.8	I	0.1	0.35
D	2.3	2.7	J	0.2(TYP.)	
E	4.5	4.9	K	0.5*15°(TYP.)	
F	2.3	2.7			

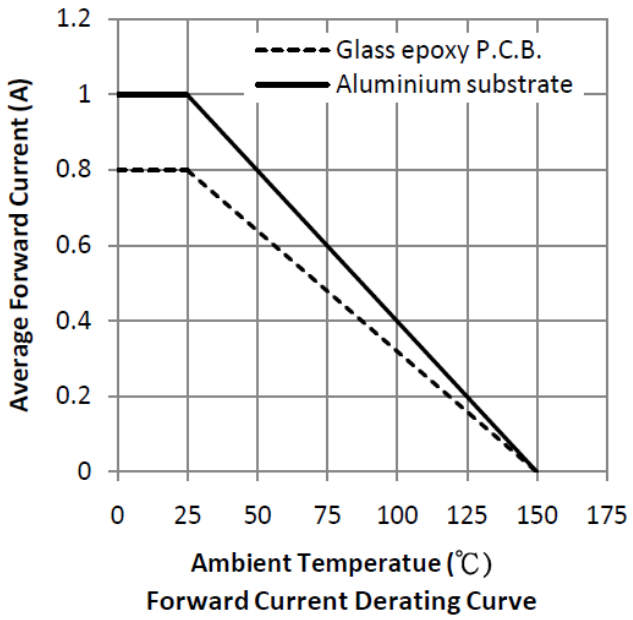
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

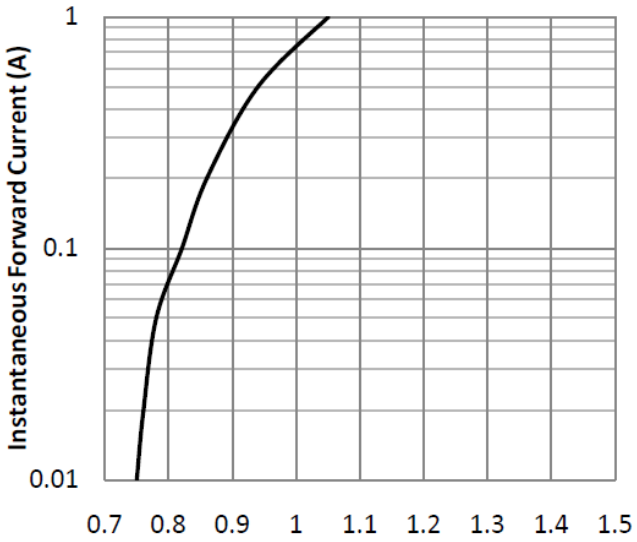
Parameter		Symbol	Part Number						Unit
			MD102S	MD103S	MD104S	MD105S	MD106S	MD107S	
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS Voltage		V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Current	On glass-epoxy P.C.B. [1]	$I_{F(AV)}$	0.8						A
	On aluminum substrate [2]		1						
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	40						A
Maximum instantaneous forward voltage @ 0.4A per leg [3]		V_F	1.05						V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_A=25°C	I_R	10						μA
	T_A=125°C		150						
Rating for fusing, 1ms≦t≦8.3ms		I^2T	6.6						A^2S
Thermal resistance junction to ambient [4]		$R_{\theta JA}$	85						°C/W
Thermal resistance junction to lead [4]		$R_{\theta JL}$	20						°C/W
Operating and Storage Temperature range		T_J, T_{STG}	-55~150						°C

Note:
1. On glass epoxy P.C.B. mounted on 0.05x0.05"(1.3x1.3mm) pads
2. On aluminum substrate P.C.B. with area of 0.8"x0.8"(20x20mm) mounted on 0.05X0.05"(1.3X1.3mm) solder pad
3. Pulse test with PW=300us, 1%duty cycle.
4. Thermal resistance from junction to ambient and junction to lead mounted on P.C.B. with 0.2X0.2"(5X5mm) copper pads

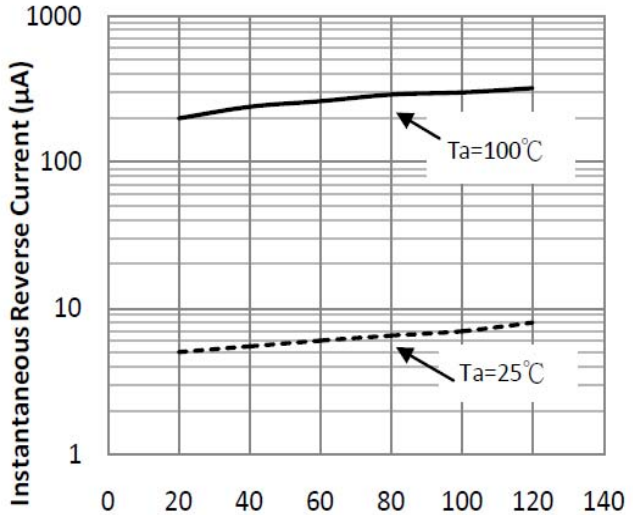
RATINGS AND CHARACTERISTIC CURVES



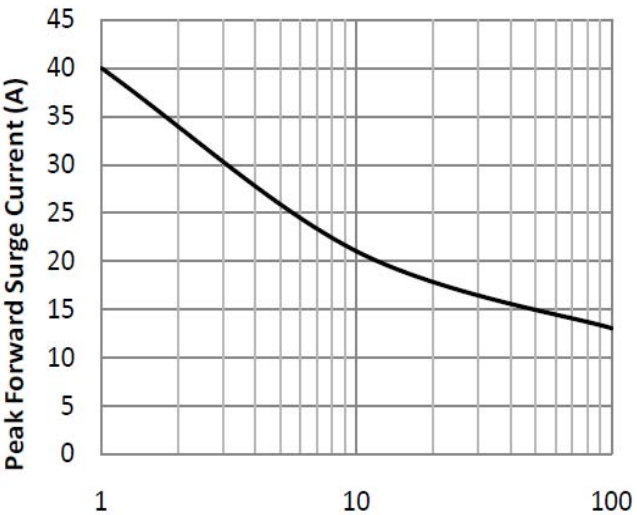
Forward Current Derating Curve



Typical Forward Characterisitics



Typical Reverse Leakage Characteristics Per Leg



Non-Repetitive Peak Forward Surge Current