Elektronische Bauelemente

SM1020D~SM10100D

Voltage 20V~100V

10Amp Schottky Barrier Rectifiers

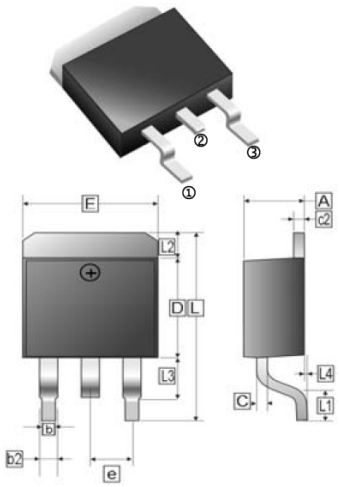
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

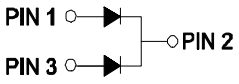
FEATURES

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Epitaxial Construction

TO-263(D^2-PACK)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.00	4.87	c2	1.07	1.65
b	0.51	1.01	b2	1.34 REF	
L4	0.00	0.30	D	8.0	9.65
C	0.30	0.74	e	2.54 REF	
L3	1.50 REF		L	14.6	16.1
L1	2.5 REF		L2	1.27 REF	
E	9.60	10.67			



MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL94V-0 Rate Flame Retardant
- Metallurgically Bonded Construction
- Mounting Position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263(D^2-PACK)	0.8K	13 inch

ORDER INFORMATION

Part Number	Type
SM1020D~SM10100D	Lead (Pb)-free
SM1020D-C~SM10100D-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter		Symbol	Part Number				Unit
			SM1020D	SM1040D	SM1060D	SM10100D	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	40	60	100	V
Maximum RMS Voltage		V_{RMS}	14	32	42	70	V
Maximum DC Blocking Voltage		V_{DC}	20	40	60	100	V
Maximum Average Forward Rectified Current		I_F	10				A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I_{FSM}	125				A
Maximum Instantaneous Forward Voltage @5A Per Leg		V_F	0.55		0.65	0.83	V
Maximum Reverse Current at Rated VR Per Diode [3]	T_J=25℃	I_R	0.3		0.2	0.1	mA
	T_J=100℃		45		22.5	10	
Typical Junction Capacitance [1]		C_J	700		460	280	pF
Typical Thermal Resistance [2]		$R_{\theta JC}$	6				℃/W
Operating & Storage Temperature		T_J ,T_{STG}	-50~150				℃

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Case. FR4 Board Heat sink size: 10*10*0.2mm.
3. Pulse test: Pulse Width≦300μs, Duty Cycle≦2.0%.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-Typical Forward Current Derating Curve

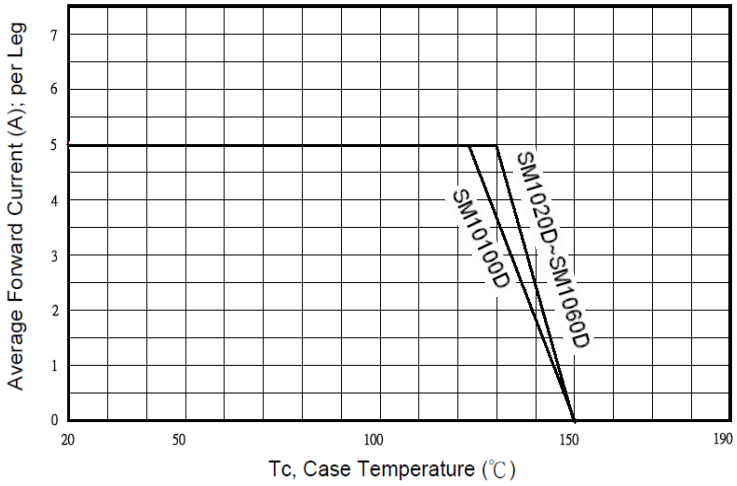

FIG.2-TYPICAL FORWARD CHARACTERISTICS

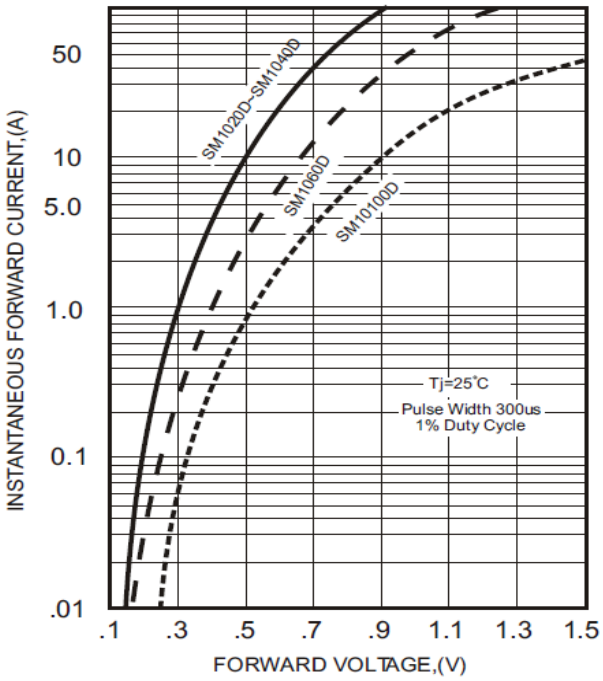

FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

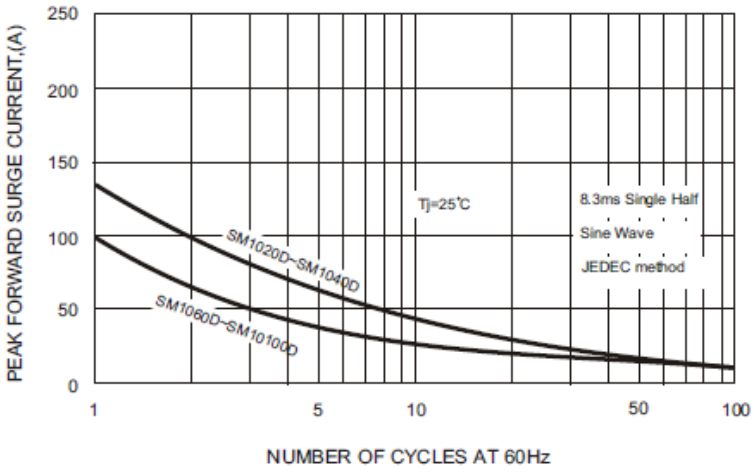

FIG.4-TYPICAL JUNCTION CAPACITANCE

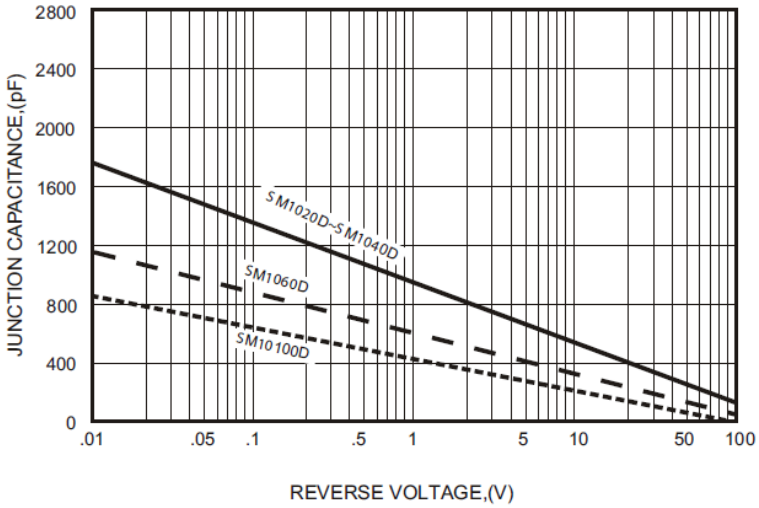

FIG.5 - TYPICAL REVERSE CHARACTERISTICS