Elektronische Bauelemente

SM3080D

Voltage 80V

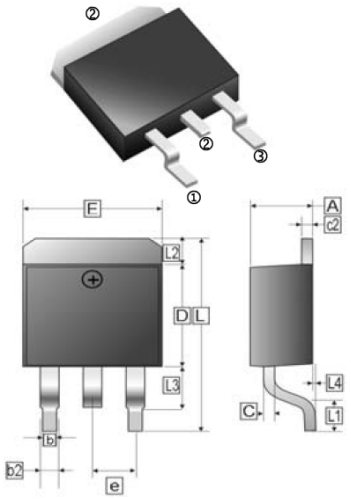
30.0 Amp Schottky Barrier Rectifiers

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

FEATURES

- Trench Barrier Schottky Technology
- Low Forward Voltage Drop
- Low Reverse Current
- High Current Capability
- High Reliability
- High Surge Current Capability
- Epitaxial Construction

TO-263



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	2.50 REF		L2	1.27 REF	
E	9.60	10.67			

MECHANICAL DATA

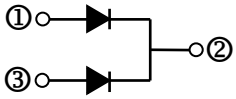
- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: As marked
- Mounting position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch

ORDER INFORMATION

Part Number	Type
SM3080D	Lead (Pb)-free
SM3080D-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	Rating	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	80	V
Working Peak Reverse Voltage		V_{RSM}	80	V
Maximum DC Blocking Voltage		V_{DC}	80	V
Maximum Average Forward Rectified Current	(Per Leg)	I_F	15	A
	(Per Device)		30	
Peak Forward Surge Current, 8.3ms single half sine-wave Superimposed on rated load (JEDEC method)		I_{FSM}	150	A
Voltage Rate of Chance (Rated V_R)		dv/dt	10000	V/μs
Typical Thermal Resistance [3]		$R_{\theta JC}$	3	℃/W
Operating and Storage Temperature Range		T_J,T_{STG}	-40~150	℃

ELECTRICAL CHARACTERISTICS

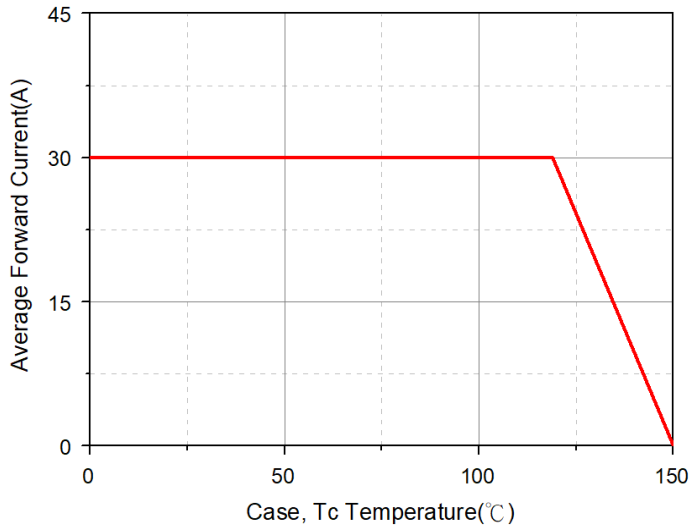
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	0.6	0.63	V	I_F=10A, T_J=25℃
		0.66	0.69		I_F=15A, T_J=25℃
		0.64	-		I_F=15 A, T_J=100℃
Maximum DC Reverse Current at Rated DC Blocking Voltage [2]	I_R	-	0.2	mA	T_J=25℃
		-	20		T_J=100℃
Typical Junction Capacitance [1]	C_J	750	-	pF	

Notes:

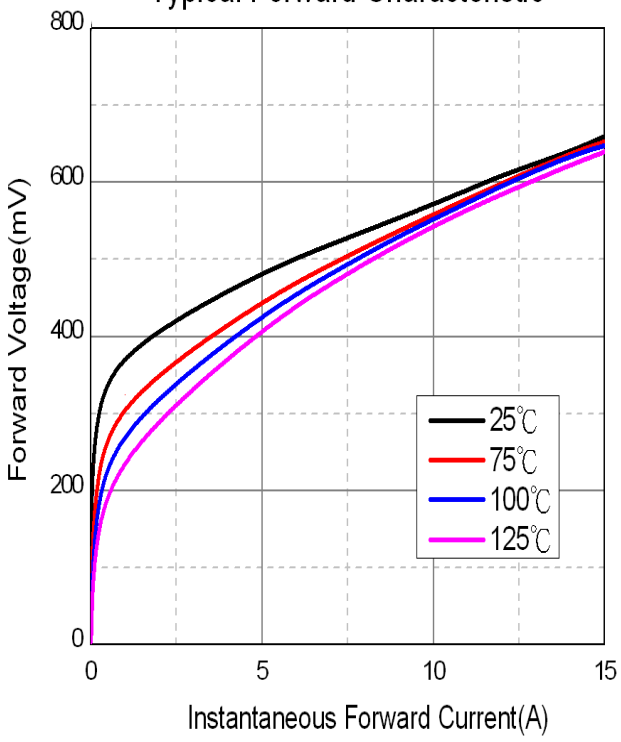
1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. Pulse Test: Pulse Width=300μs, Duty Cycle≦2%.
3. Thermal Resistance Junction to Case. FR-4 Board Heat sink size: 10*10*0.2mm.

RATINGS AND CHARACTERISTIC CURVES

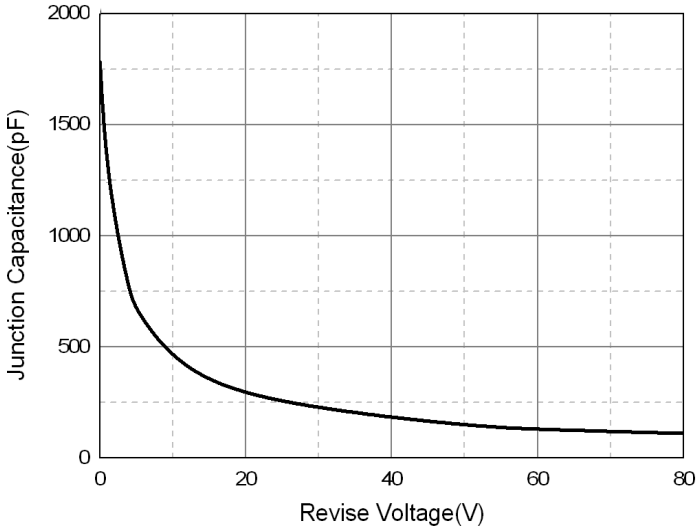
Typical Forward Current Derating Curve



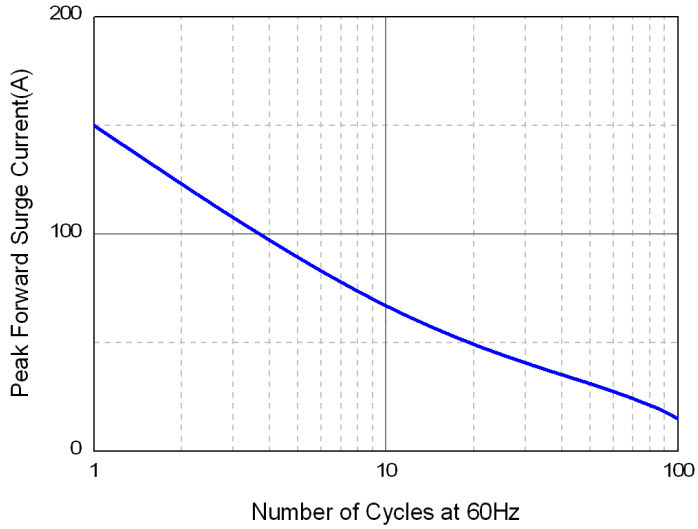
Typical Forward Characteristic



Typical Junction Capacitance



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic