

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

## MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: As Marked
- Mounting position: Any

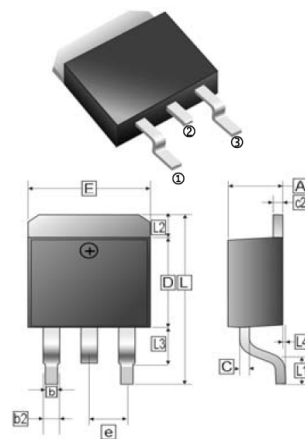
## ORDER INFORMATION

Part Number	Type
SM30150D	Lead (Pb)-free
SM30150D-C	Lead (Pb)-free and Halogen-free

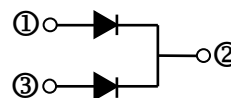
## PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-263	0.8K	13 inch

### 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	2.5	REF	L2	1.27	REF
E	9.60	10.67			



## 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%.)

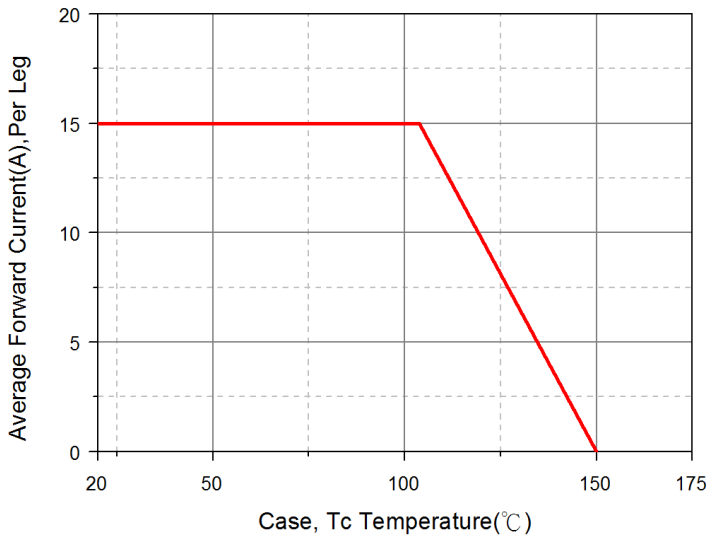
Parameter	Symbol	Ratings	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	150	V
Working Peak Reverse Voltage	$V_{RSM}$	150	V
Maximum DC Blocking Voltage	$V_{DC}$	150	V
Maximum Average Forward Rectified Current	Per Leg	15	A
	Per Device	30	
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	180	A
Maximum Instantaneous Forward Voltage @ $I_F=15A$ , per leg	$T_A=25^\circ C$	0.88	V
	$T_A=125^\circ C$	0.76	
Maximum DC Reverse Current @ Rated DC Blocking Voltage <sup>2</sup>	$T_A=25^\circ C$	0.2	mA
	$T_A=125^\circ C$	5	
Typical Junction Capacitance <sup>1</sup>	$C_J$	350	pF
Voltage Rate Of Change (Rated $V_R$ )	$dv/dt$	10000	V/ $\mu S$
Typical Thermal Resistance from Junction to Case <sup>3</sup>	$R_{\theta JC}$	3.5	$^\circ C/W$
Operating Temperature Range	$T_J$	-50~150	$^\circ C$
Storage Temperature Range	$T_{STG}$	-65~175	$^\circ C$

Notes:

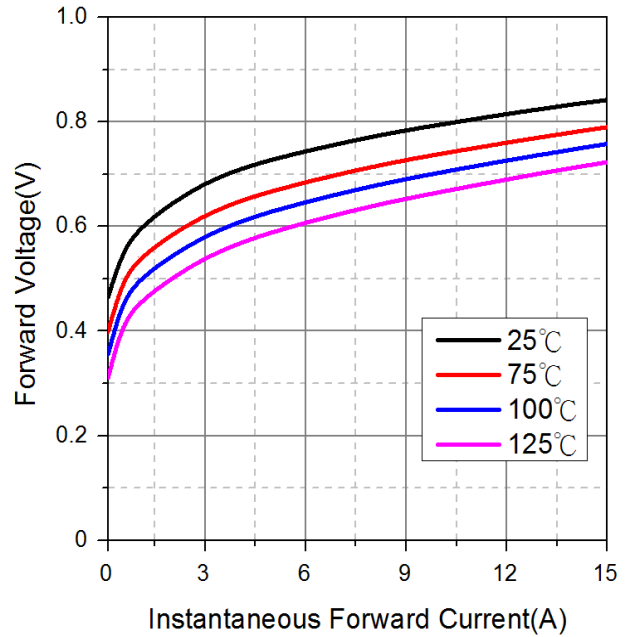
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse test: 300 $\mu S$  pulse width, 1% duty cycle.
3. Surface mounted on 2.5cm x 2.5cm x 0.5mm copper pad area

**RATINGS AND CHARACTERISTIC CURVES**

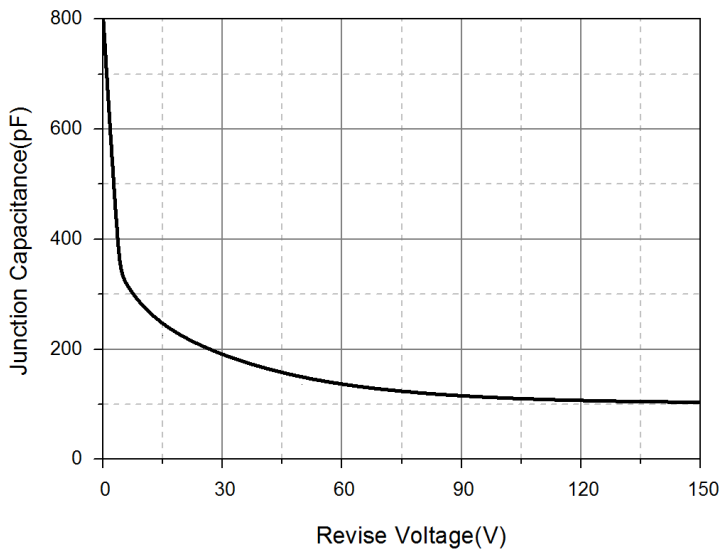
Typical Forward Current Derating Curve



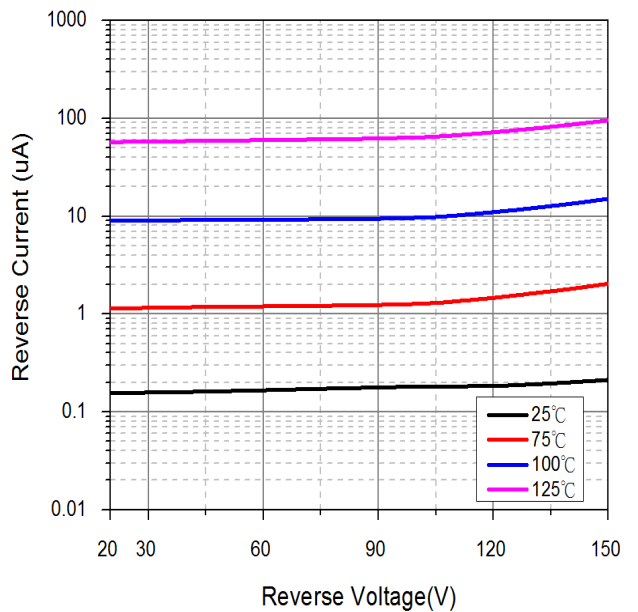
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

