Elektronische Bauelemente

SM1645D1

VOLTAGE 45 V

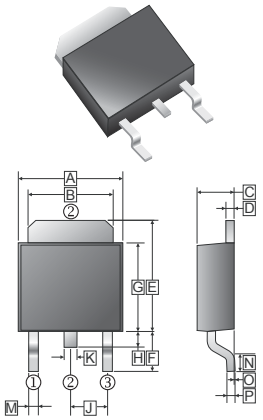
16Amps Schottky Barrier Rectifiers

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

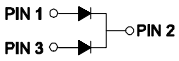
TO-252 (D-Pack)



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.35	6.90	J	2.30 REF.	
B	4.95	5.50	K	0.64	1.14
C	2.10	2.50	M	0.50	1.14
D	0.43	0.9	N	1.3	1.8
E	6.0	7.5	O	0	0.13
F	2.80 REF		P	0.58REF.	
G	5.40	6.40			
H	0.60	1.20			

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
- Weight: 0.7 grams



Absolute Rating

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	Value	UNIT
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	45	V
Maximum RMS Voltage		V_{RMS}	45	V
Maximum DC Blocking Voltage		V_{DC}	45	V
Maximum Average Forward Rectified Current	Per Terminal	I_F	8	A
	Per Device		16	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	190	A
Typical Junction Capacitance Note.1		C_J	320	pF
Typical Thermal Resistance		$R_{\theta JC}$	10	°C/W
Operating Temperature		T_J	-55~150	°C
Storage Temperature		TSTG	-55~150	°C

Static Electrical Characteristics

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Forward voltage drop (per Terminal)	VF	IF=5A	TJ=25°C	-	0.44	0.48	V
		IF=5A	TJ=125°C	-	0.37	0.40	
		IF=8A	TJ=25°C	-	0.49	0.52	
		IF=8A	TJ=125°C	-	0.45	0.47	
Reverse leakage current (note 3)	IR	VR=45V	TJ=25°C	-	65	200	uA
			TJ=125°C	-	9	20	mA

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 0.4ms.

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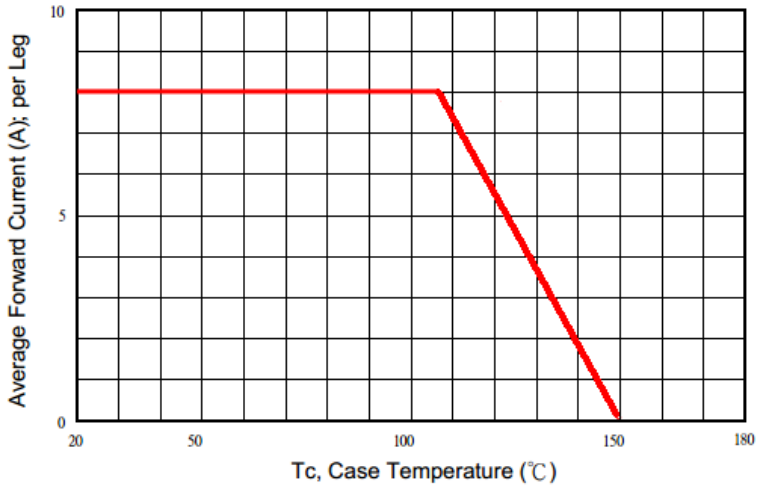
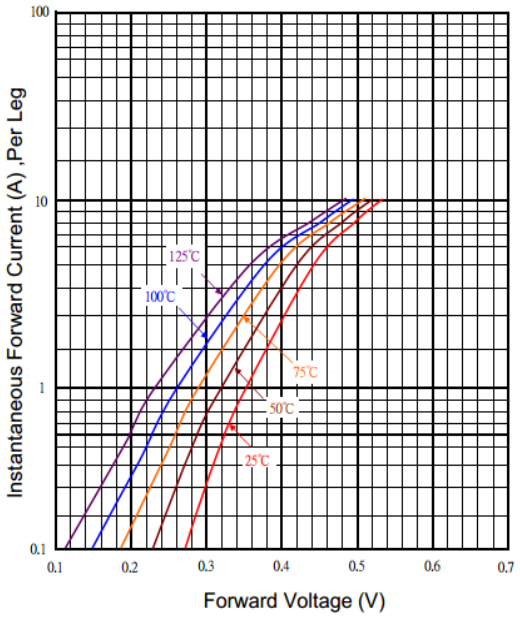
RATINGS AND CHARACTERISTIC CURVES

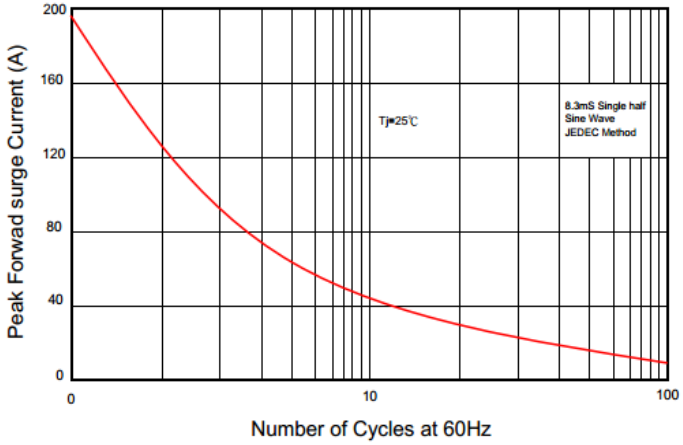
Typical Forward Current Derating Curve



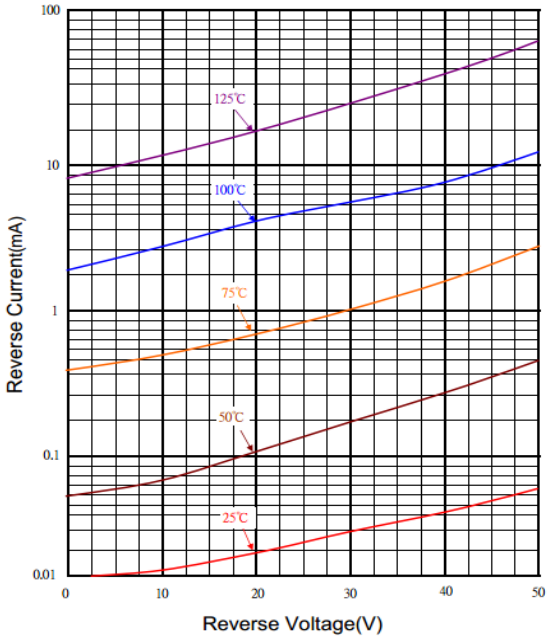
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance