

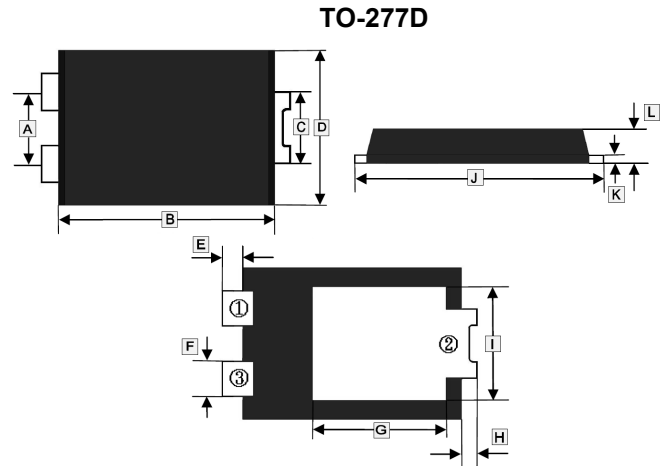
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

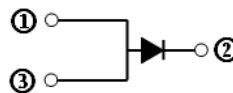
- Trench Barrier Rectifier Technology
- High thermal reliability
- Low forward voltage drop
- Low reverse current
- High forward surge capability
- Ultra low power loss and high efficiency
- Excellent high temperature stability
- Plastic material-UL flammability 94V-0

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-277D	5K	13 inch



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.65	1.95	G	3.25	3.85
B	5.3	5.5	H	0.45	0.65
C	1.7	1.9	I	2.9	3.2
D	3.8	4.2	J	6.4	6.6
E	0.45	0.65	K	0.3	0.45
F	0.8	1.0	L	1.0	1.2



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	Rating	Unit
Maximum Peak Repetitive Reverse Voltage	V_{RRM}	120	V
Maximum Working Peak Reverse Voltage	V_{RWM}	120	V
Maximum DC Blocking Voltage	V_{DC}	120	V
Maximum Average Rectified Current	I_F	15	A
Non-Repetitive Peak Forward Surge Current@ 8.3 ms single half sine-wave, superimposed on rated load (JEDEC method)	I_{FSM}	200	A
Voltage Rate of Change (Rated V_R)	dv/dt	10000	V / μs
Typical Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	110	°C / W
Typical Thermal Resistance from Junction to Lead	$R_{\theta JL}$	3.5	°C / W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS

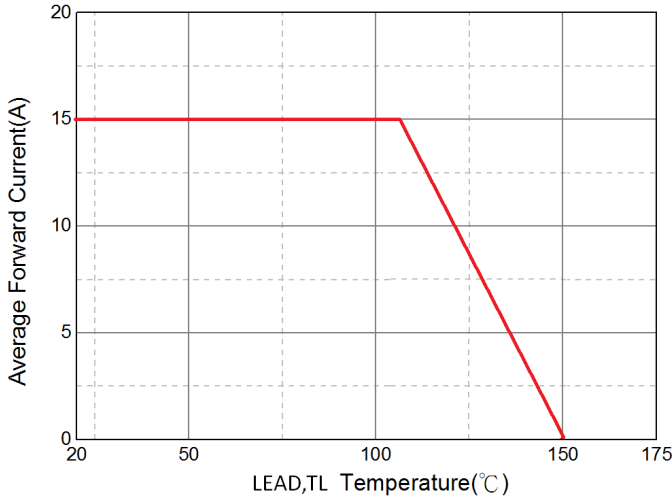
Parameter	Symbol	Typ.	Max.	Unit	Test Condition
Maximum Instantaneous Forward Voltage	V_F	0.49	0.52	V	$I_F=3A, T_J=25^\circ C$
		0.55	0.58		$I_F=5A, T_J=25^\circ C$
		0.8	0.84		$I_F=15A, T_J=25^\circ C$
		0.65	-		$I_F=15A, T_J=125^\circ C$
Maximum DC Reverse Current at Rated DC Blocking Voltage ¹	I_R	-	0.1	mA	$T_J=25^\circ C$
		-	20		$T_J=100^\circ C$
Typical Junction Capacitance ²	C_J	470	-	pF	

Notes:

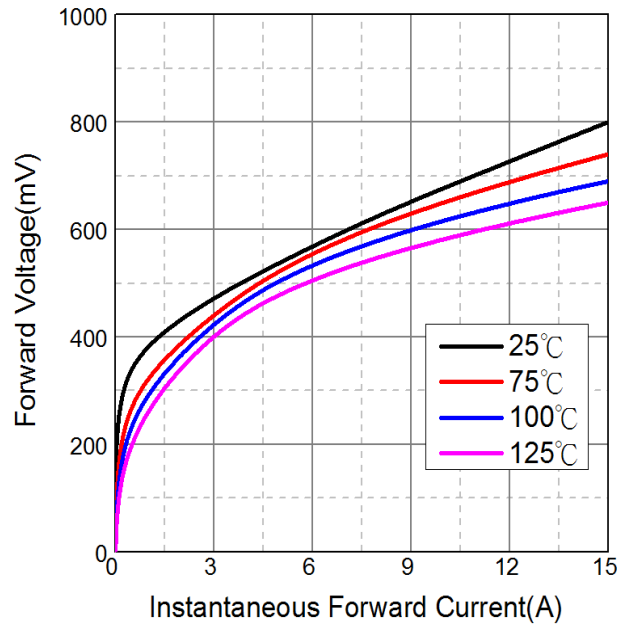
1. Pulse Test : Pulse width=300 μs , duty cycle $\leq 2.0\%$.
2. Measured at 1MHz and applied reverse voltage of 5.0V D.C.

CHARACTERISTIC CURVES

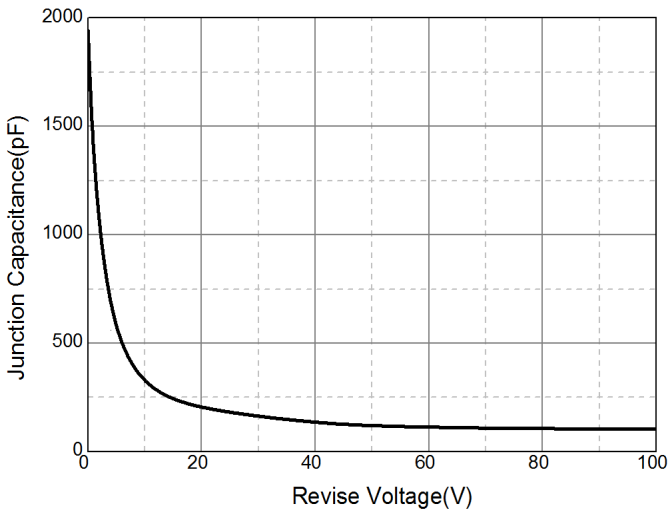
Typical Forward Current Derating Curve



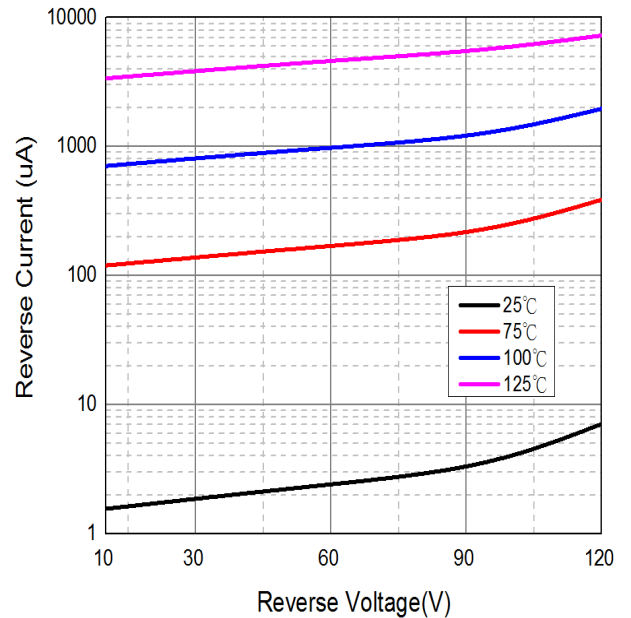
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

