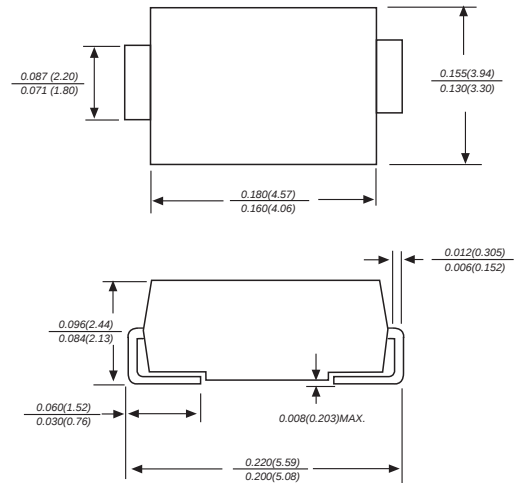


Features

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.05%
- Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- Typical IR less than 1μA above 10V
- High Temperature soldering: 260°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability 94V-O
- Pb-free plated

DO-214AA/SMB



Uni-Polar



Bi-Polar



Dimensions in inches and (millimeters)

Mechanical Data

- **Case:** JEDEC DO-214AA. Molded plastic over glass passivated junction
- **Terminals:** Solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denoted positive end (cathode) except Bidirectional
- **Standard Packaging:** 12mm tape (EIA STD RS-481)

Devices For Bipolar Application

- For Bidirectional use C or CA Suffix for types TECC6.0 thru types TECC170 (e.g. TECC6.0C , TECC170CA)
- Electrical characteristics apply in both directions

Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1,2 ,FIG.1)	P _{PPM}	1000	Watts
Peak Pulse Current of on 10/1000μs waveform (Note 1,FIG.3)	I _{PPM}	SEE TABLE 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note2,3)	I _{FSM}	200	Amps
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

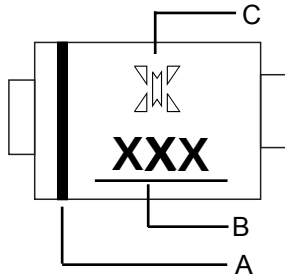
Notes :

- 1.Non-repetitive current pulse , per Fig. 3 and derated above TA = 25°C per Fig. 2 .
- 2.Mounted on 8.0mm x 8.0mm Copper Pads to each terminal
- 3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

Electrical Characteristics

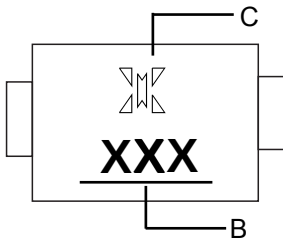
Type		Marking Code		Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	V(R) (V)	IR (uA)	V(BR)		IT (mA)	Ipp (A)	VC (V)
TECC6.0A	TECC6.0CA	6D	6H	6	200	6.67	7.37	10	97.10	10.3
TECC8.0A	TECC8.0CA	8D	8H	8	50	8.89	9.83	1	73.50	13.6
TECC12A	TECC12CA	12D	12H	12	1	13.30	14.70	1	50.30	19.9
TECC15A	TECC15CA	15D	15H	15	1	16.70	18.50	1	41.00	24.4
TECC16A	TECC16CA	16D	16H	16	1	17.80	19.70	1	38.50	26.0
TECC20A	TECC20CA	20D	20H	20	1	22.20	24.50	1	30.90	32.4
TECC22A	TECC22CA	22D	22H	22	1	24.40	26.90	1	28.20	35.5
TECC24A	TECC24CA	24D	24H	24	1	26.70	29.50	1	25.70	38.9
TECC26A	TECC26CA	26D	26H	26	1	28.90	31.90	1	23.80	42.1
TECC28A	TECC28CA	28D	28H	28	1	31.10	34.40	1	22.00	45.4
TECC30A	TECC30CA	30D	30H	30	1	33.30	36.80	1	20.70	48.4
TECC33A	TECC33CA	33D	33H	33	1	36.70	40.60	1	18.80	53.3
TECC36A	TECC36CA	36D	36H	36	1	40.00	44.20	1	17.20	58.1
TECC40A	TECC40CA	40D	40H	40	1	44.40	49.10	1	15.50	64.5
TECC58A	TECC58CA	58D	58H	58	1	64.40	71.20	1	10.70	93.6
TECC60A	TECC60CA	60D	60H	60	1	66.70	73.70	1	10.30	96.8
TECC150A	TECC150CA	150D	150H	150	1	167.00	185.00	1	4.10	243.0
TECC170A	TECC170CA	170D	170H	170	1	189.00	209.00	1	3.60	275.0

Marking For Uni-Polar



Symbol	Explanation
A	Color Band Denotes Cathode
B	Marking Code, as above sheet
C	Logo

Marking For Bi-Polar



Symbol	Explanation
B	Marking Code, as above sheet
C	Logo

Characteristic Curves (TA=25 °C unless otherwise noted)

Fig.1 Peak Pulse Power Rating

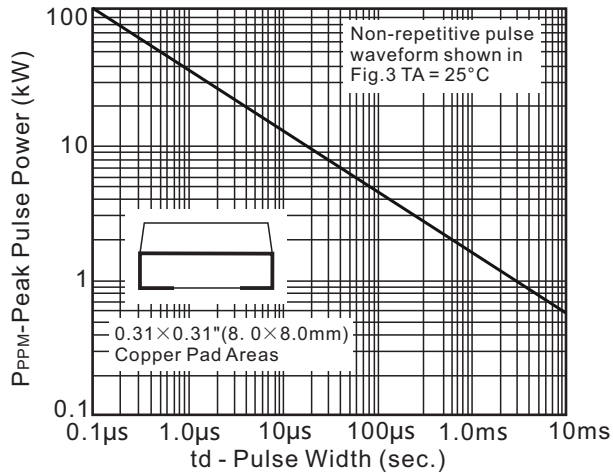


Fig.2 Pulse Derating Curve

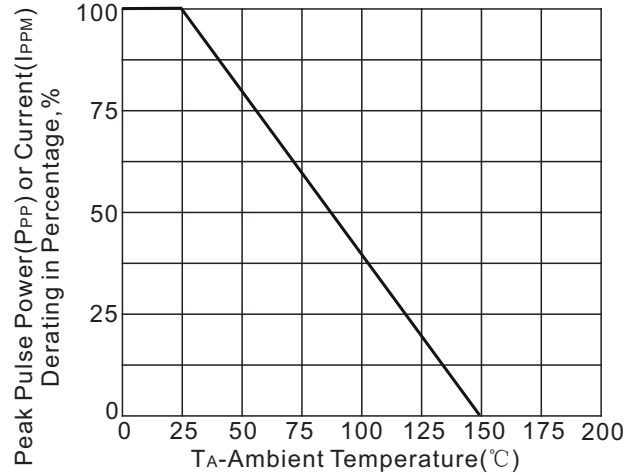


Fig.3 Pulse Waveform

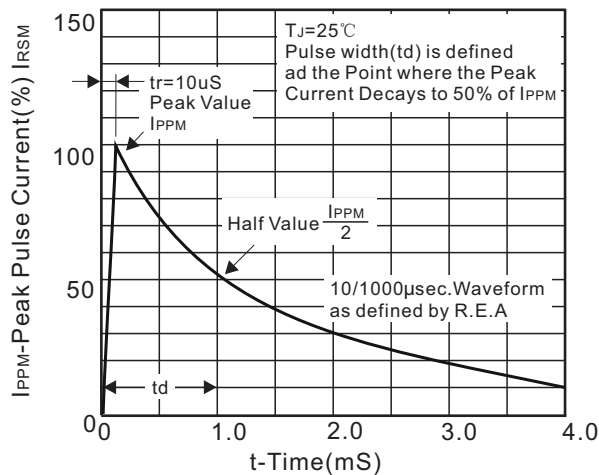


Fig.4 Typical Junction Capacitance

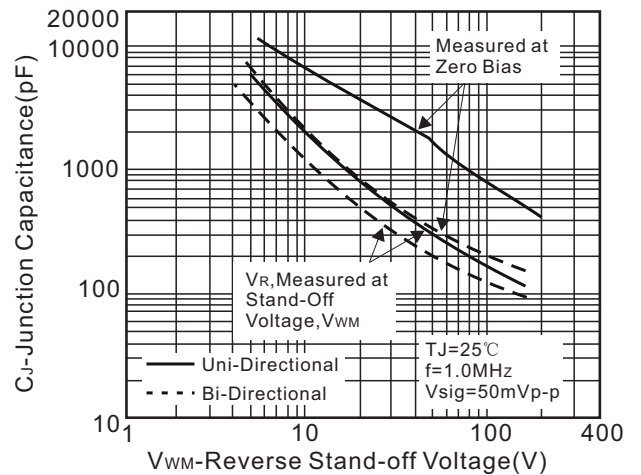


Fig.5 Typ. Transient Thermal Impedance

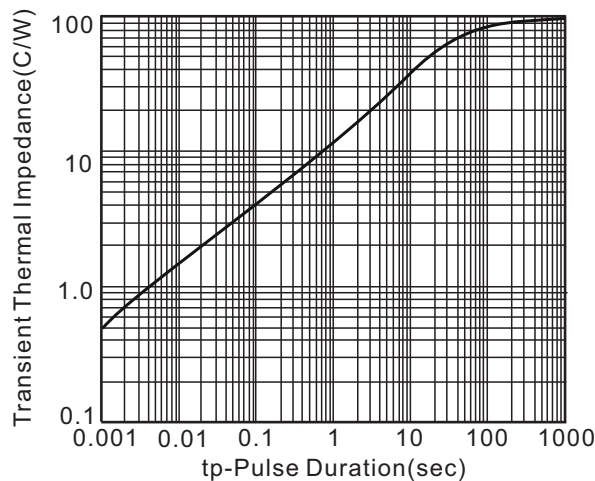
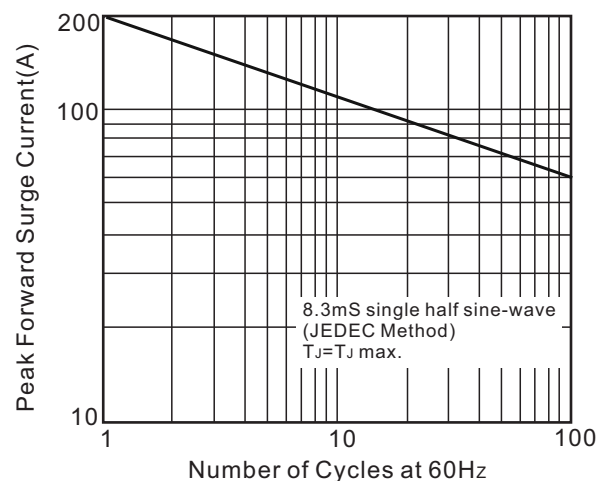
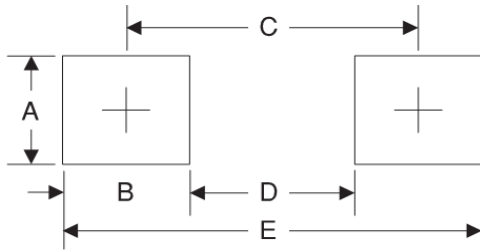


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only

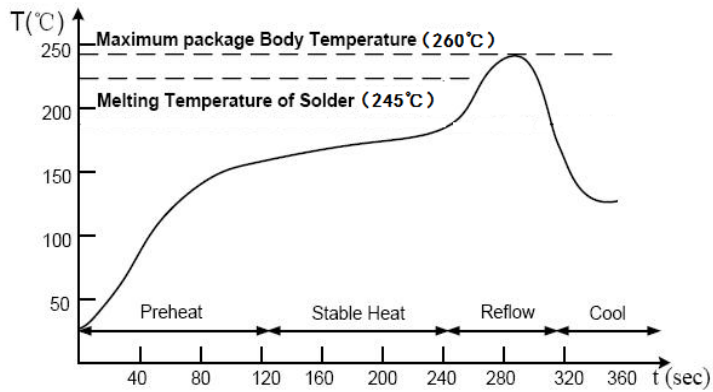


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.30	0.091
B	2.00	0.078
C	4.10	0.161
D	2.10	0.083
E	6.10	0.240

Suggested Soldering Temperature Profile

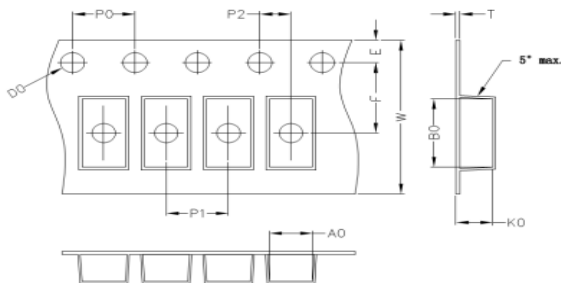


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
3.80	5.40	2.45	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMB	13'	330	3.0	340	6.0	360*360*360	48