How to Order

Device	Package	Carrier	Order As
TISP4SxxxyzBJ	BJ (J-Bend DO-214AA/SMB)	Embossed Tape Reeled	TISP4SxxxyzBJR-S

Insert xxx value corresponding to protection voltages.

Absolute Maximum Ratings, T_A = 25 °C (Unless Otherwise Noted)

Parameter		Symbol	Value	Unit
Repetitive peak off-state voltage	TISP4S040L1BJR-S	V_{DRM}	± 25	V
	TISP4S040M1BJR-S		± 25	
	TISP4S077M3BJR-S		± 58	
	TISP4S088M3BJR-S		± 65	
	TISP4S098M3BJR-S		± 75	
	TISP4S160M3BJR-S		± 120	
	TISP4S180M3BJR-S		± 140	
	TISP4S240M3BJR-S		± 180	
	TISP4S260M3BJR-S		± 190	
	TISP4S300M3BJR-S		± 220	
	TISP4S350M3BJR-S		± 275	
	TISP4S350T3BJR-S		± 275	
	TISP4S400M3BJR-S		± 300	
Non-repetitive peak on-state pulse current 10/1000 µs (GR-1089-CORE, 10/1000 µs voltage wave shape)	TISP4SxxxLyBJR-S	I_{TSP}	30	A
	TISP4SxxxMyBJR-S		50	
	TISP4SxxxT3BJR-S		80	
Operating Temperature		T_J	-40 to +150	°C
Storage Temperature		T_{STG}	-55 to +150	°C

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Thermal Characteristics, T_A = 25 °C (Unless Otherwise Noted)

Parameter		Test Conditions	Min.	Nom.	Max.	Unit
RΘJA	Junction to free air thermal resistance	EIA/JESD51-3 PCB, $I_T = I_{TSM(1000)}$, T_A = 25 °C		115		°C/W

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Parameter Measurement Information

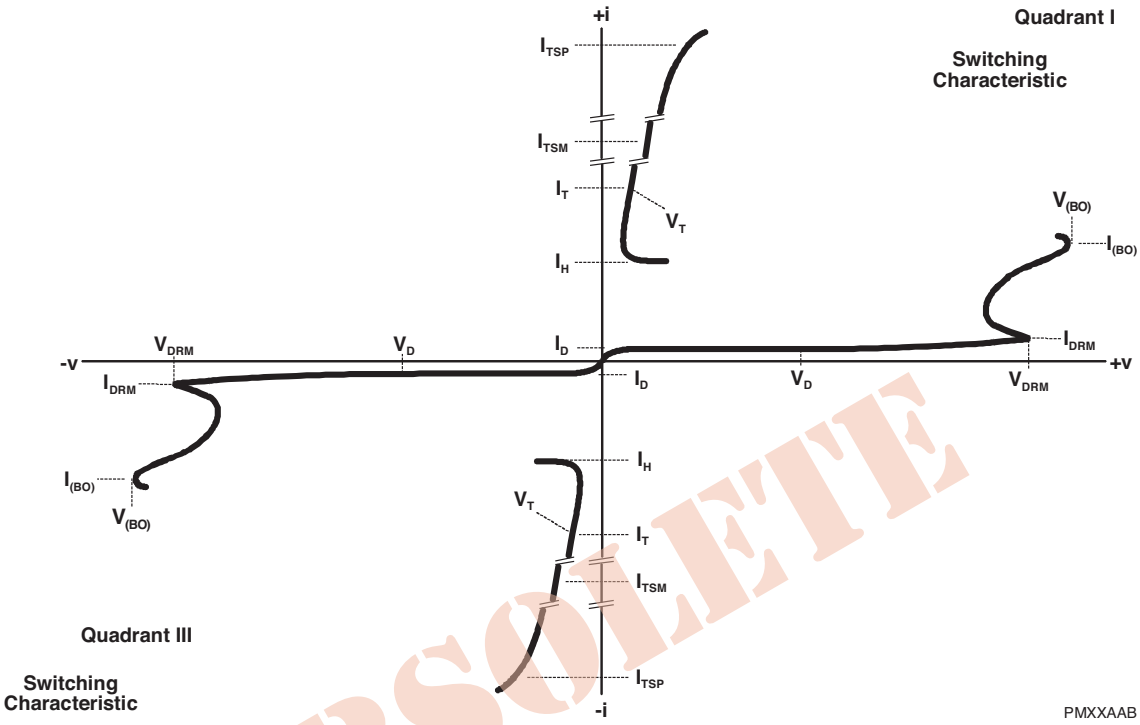

Figure 1. Voltage-current Characteristic for T and R Terminals
All Measurements are Referenced to the R Terminal

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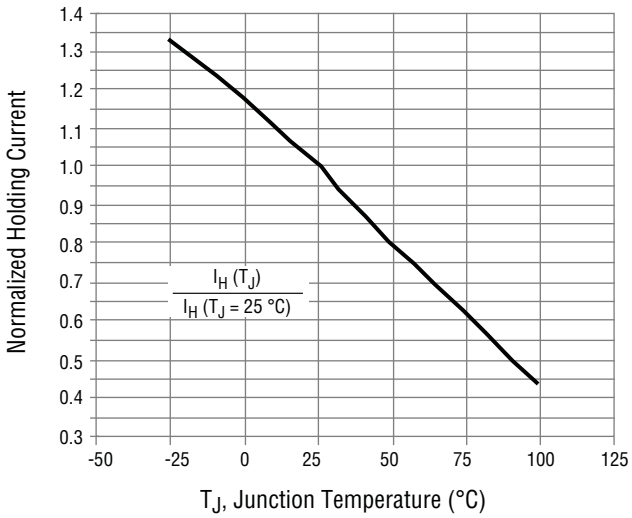
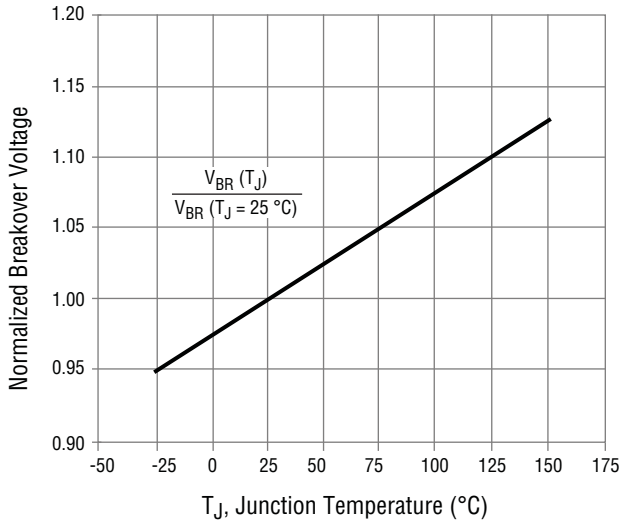
Typical Characteristics

NORMALIZED HOLDING CURRENT vs JUNCTION TEMPERATURE



NORMALIZED BREAKOVER VOLTAGE vs JUNCTION TEMPERATURE



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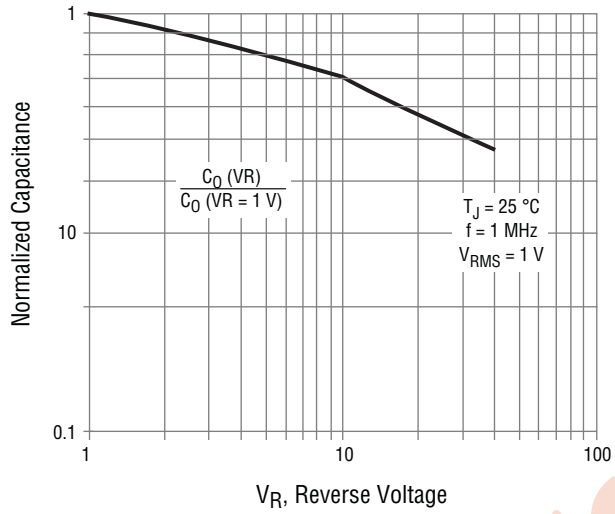
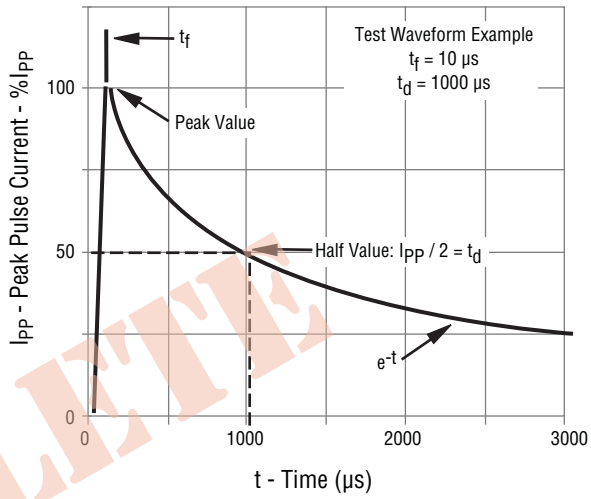
Typical Characteristics

NORMALIZED CAPACITANCE vs REVERSE VOLTAGE

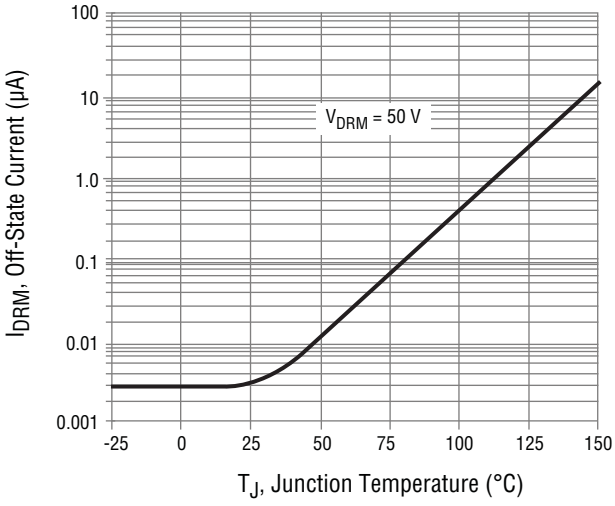


Excludes TISP4S040x1BJ devices as these are only rated up to 25 V.

PEAK PULSE CURVE



OFF-STATE CURRENT vs JUNCTION TEMPERATURE



Excludes TISP4S040x1BJ devices as these devices cannot be operated at 50 V.

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Device Symbolization Code

Devices will be coded as below. As the device parameters are symmetrical, terminal 1 is not identified.

Device	Symbolization Code
TISP4S040L1BJR-S	KBL
TISP4S040M1BJR-S	GBL
TISP4S077M3BJR-S	GCL
TISP4S088M3BJR-S	GDL
TISP4S098M3BJR-S	GEL
TISP4S160M3BJR-S	GGL
TISP4S180M3BJR-S	GHL
TISP4S240M3BJR-S	GIL
TISP4S260M3BJR-S	GJL
TISP4S300M3BJR-S	GKL
TISP4S350M3BJR-S	GLL
TISP4S350T3BJR-S	GYL
TISP4S400M3BJR-S	GML

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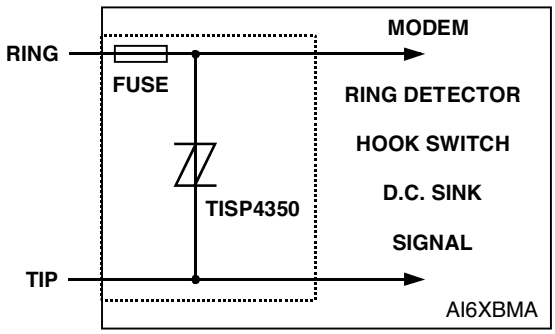
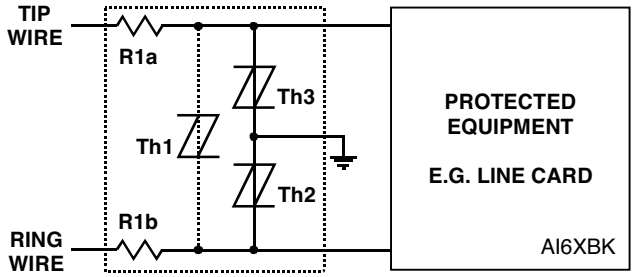
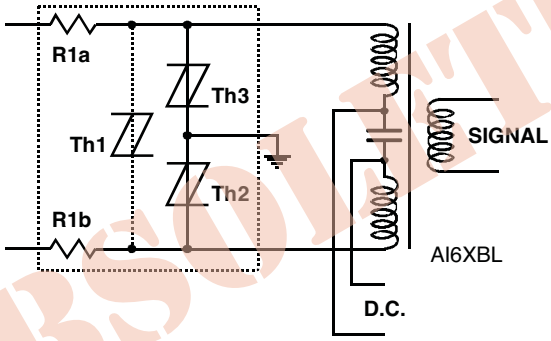
Typical Applications



Modem Inter-wire Protection



Protection Module



ISDN Protection

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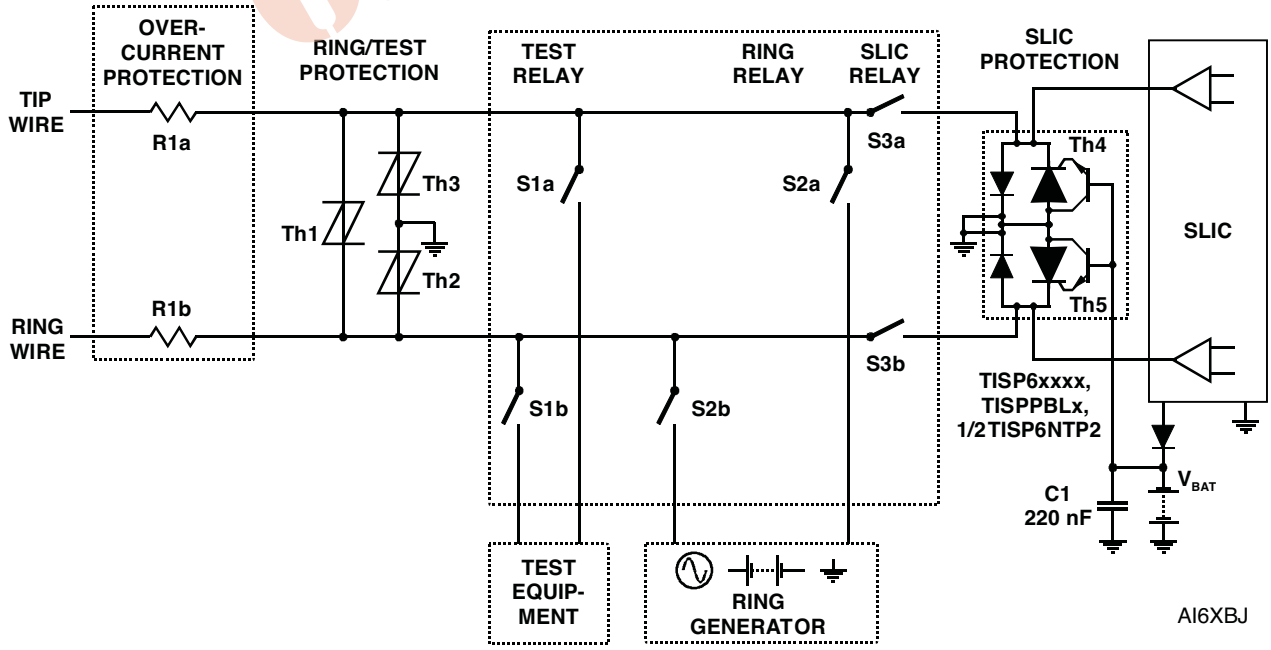

Line Card Ring/Test Protection

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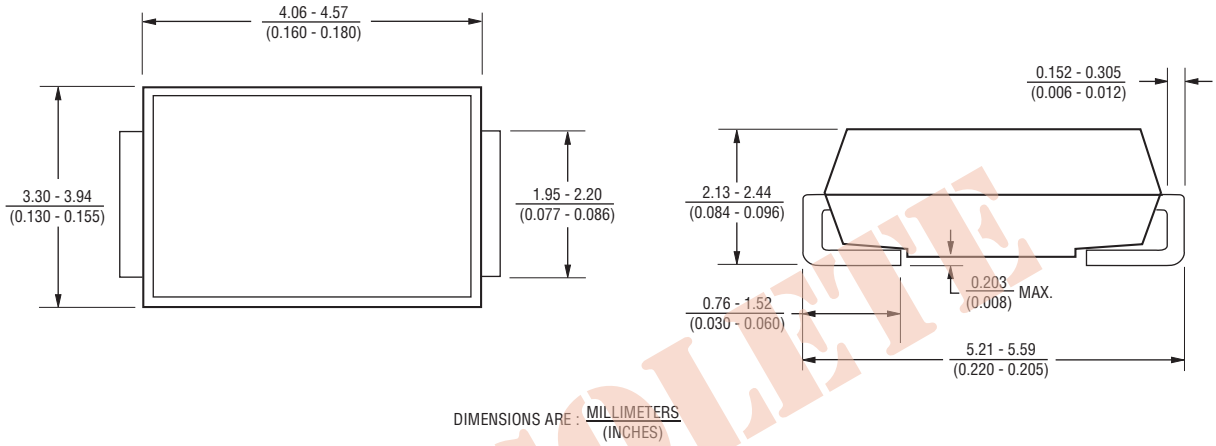
Package Outline Dimensions

This surface mount two terminal package consists of a circuit mounted on a lead frame and encapsulated within a plastic compound. The compound is designed to withstand normal soldering temperatures with no deformation and circuit performance characteristics will remain stable when operated in most high humidity conditions. Terminals require no additional cleaning or processing when used in soldered assembly.

SMB (DO-214AA) Package



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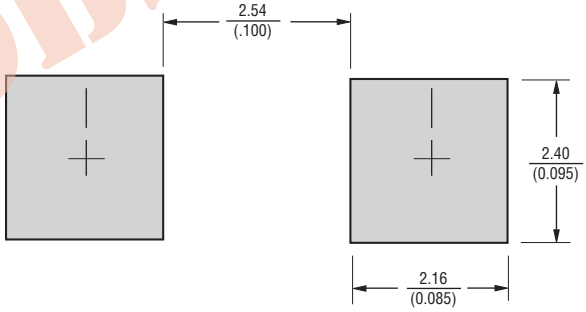
Recommended Printed Wiring Land Pattern Dimensions

SMB (DO-214AA) Land Pattern



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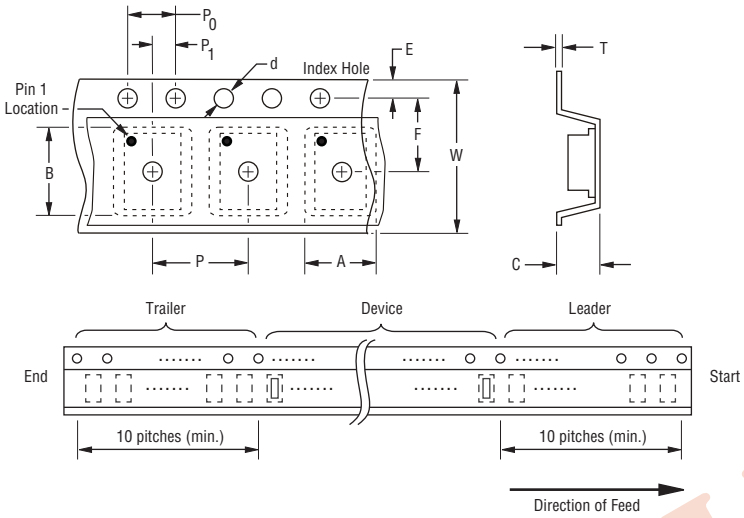
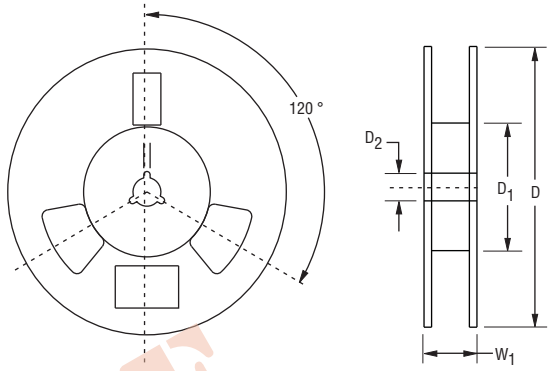
Tape & Reel Dimensions

The product will be dispensed in tape and reel format (see diagram below).





DIMENSIONS: MM / (INCHES)

Devices are packed in accordance with EIA 481 standard specifications shown here.

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Item	Symbol	SMB (DO-214AA)
Carrier Width	A	4.94 ± 0.10 (0.194 ± 0.004)
Carrier Length	B	5.57 ± 0.10 (0.210 ± 0.004)
Carrier Depth	C	2.36 ± 0.10 (0.093 ± 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	330 (12.992)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.20 (0.512 ± 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.05 (0.079 ± 0.002)
Overall Tape Thickness	T	0.30 ± 0.10 (0.012 ± 0.004)
Tape Width	W	12.00 ± 0.20 (0.472 ± 0.008)
Reel Width	W_1	18.4 (0.724) MAX.
Quantity per Reel	--	3,000

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