



TCD6F13AH

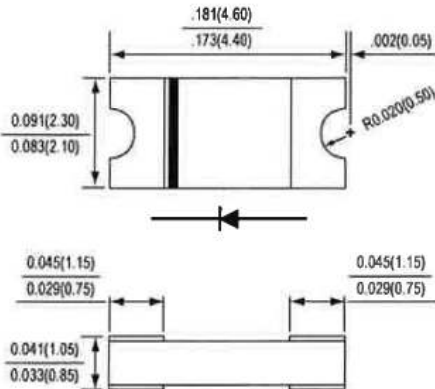
SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Stand-off Voltage - 13 Volts

Peak Pulse Power - 600 Watts

PATENTED

2010-S



*Dimensions in inches and (millimeters)

SuperChip™



FEATURES

- * Halogen-free type
- * Lead free product
- * Leadless chip form , no lead damage
- * Lead-free solder joint , no wire bond & lead frame
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * For surface mounted applications in order to optimize board space
- * Low profile package
- * Built-in strain relief
- * Glass passivated junction
- * Low inductance
- * High temperature soldering: 260°C/10 seconds at terminals

MECHANICAL DATA

Case : Packed with FRP substrate and epoxy underfilled
 Terminals : Pure Tin plated (Lead-Free),
 solderable per MIL-STD-750, Method 2026.
 Polarity : Cathode Band, Laser marking
 Standard Packaging : 12mm tape (EIA-481)
 Marking : Cathode Band, Laser marking

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000uS waveform (Note 1, 2, FIG.1)	P _{PPM}	600	Watts
Peak Pulse Current on 10/1000uS waveform (Note 1,FIG.3)	I _{PPM}	27.90	Amps
Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note 2, 3)	I _{FSM}	60	Amps
Operating junction and Storage Temperature Range	T _J , T _{STG}	-50 to +150	°C

NOTES (1) Non-repetitive current pulse , per Fig. 3 and derated above T_A = 25°C per Fig. 2 .
 (2) Mounted on 5.0mm² copper pads to each terminal.
 (3) 8.3ms single half sine-wave , or equivalent square wave, duty cycle = 4 pulses per minutes maximum.

600 WATTS Surface Mount TVS 2010 (T_{amb} = 25°C)

PART NUMBER	V _{RWM} (V)	V _{BR} @ I _T			I _R @ V _{RWM} (µA)	V _c @ I _{pp}	
		MIN. (V)	MAX. (V)	I _T (mA)		MAX. (V)	(A)
TCD6F13AH	13	14.40	15.90	1.0	5.0	21.50	27.90

RATINGS AND CHARACTERISTIC CURVES OF TCD6F13AH

FIG. 1- PEAK PULSE POWER RATING CURVE

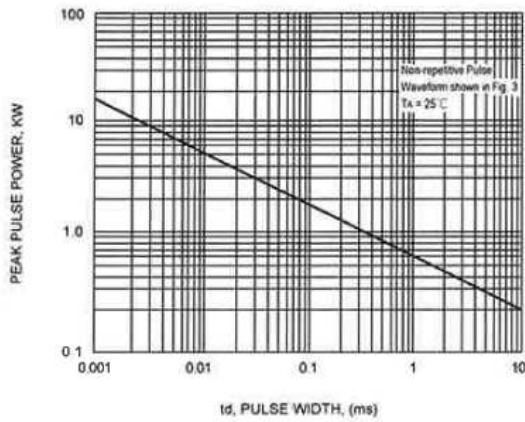


FIG. 2- DERATING CURVE

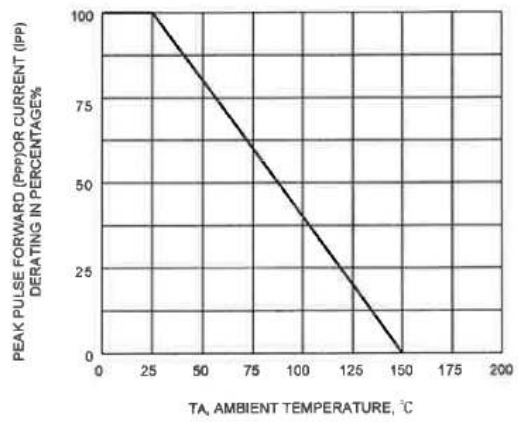


FIG. 3- PULSE WAVEFORM

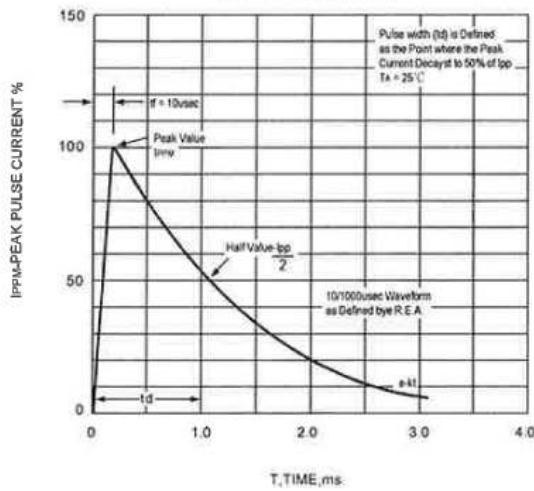


FIG. 4- TYPICAL JUNCTION CAPACITANCE

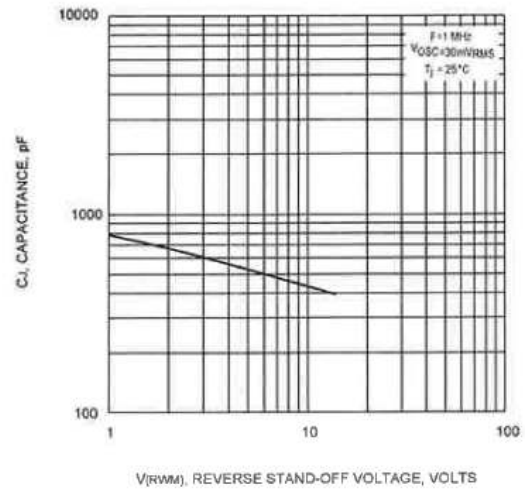


FIG. 5- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

