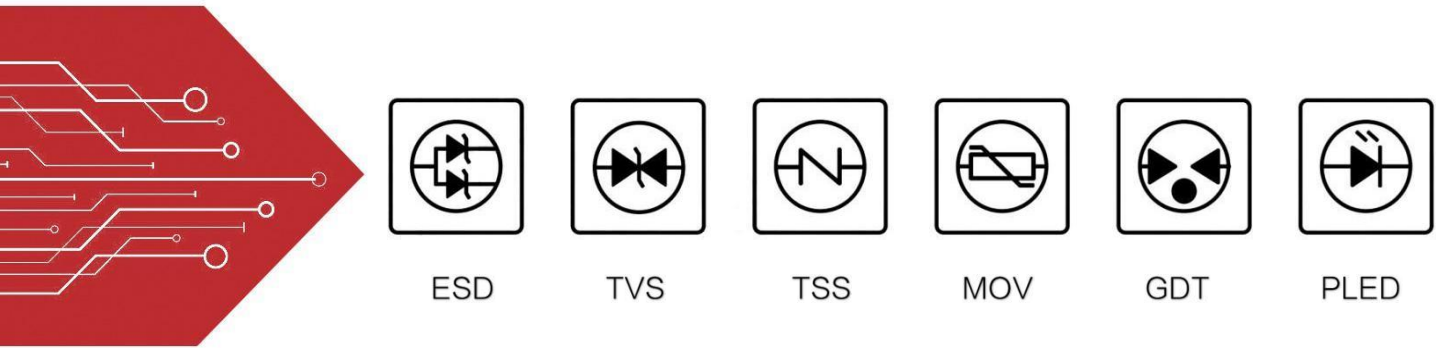
MSKSEMI
SEMICONDUCTOR



Product data sheet

Applications

” Cellular phones ” Portable devices ” Digital cameras ” Power supplies

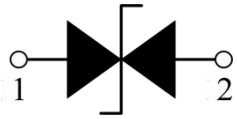
Features

” Small Body Outline Dimensions
” Low Body Height
” Peak Power up to 45 Watts @ 8 x 20 μs Pulse
” Low Leakage current
” Response Time is Typically < 1 ns
” We declare that the material of product compliance with RoHS requirements.

Pin Description

DFN1006

Schematic Diagram



ELECTRICAL CHARACTERISTICS

P/N	V_{RWM} (V)	I_{R1}(μA) @ V_{RWM}	I_{R2}(μA) @ V_R=3.5V	V_{BR} (V) @ I_T (Note 2)		I_T	V_C (V) @ I_{PP} = 1 A (Note 3)	V_C (V) @MAX I_{PP} (Note 3)	I_{PP}(A) (Note 3)	P_{PK}(W) (Note 3)	C (pF)
	Max	Max	Max	Min	Max	mA	Max	Max	Max	Max	Max
ST0541D4-MS	5.0	0.5	0.3	5.6	8.0	1.0	9.8	15	3	45	2.5

*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25℃.

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μs)	45	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°C
T_{op}	Operating Temperature Range	-40 to +150	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge	±30	KV
	contact discharge	±30	

Electrical Parameter

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T

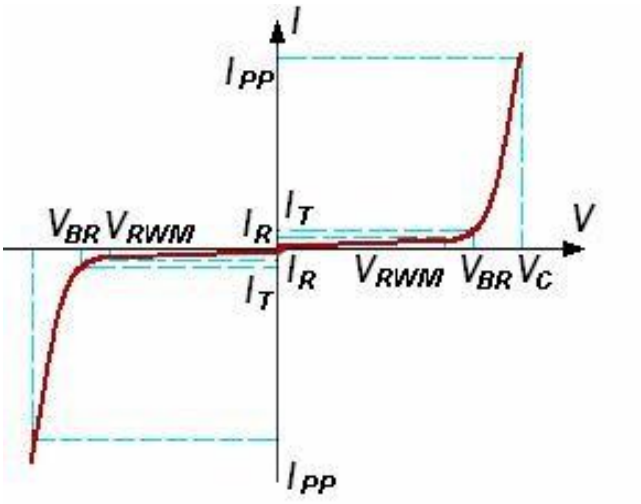


FIG1: Pulse Waveform

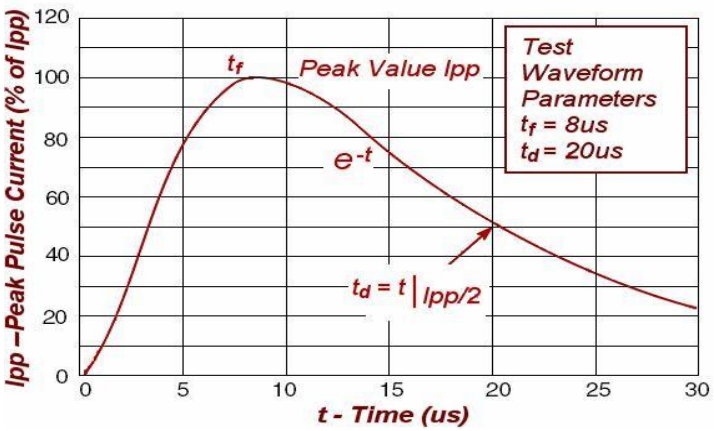
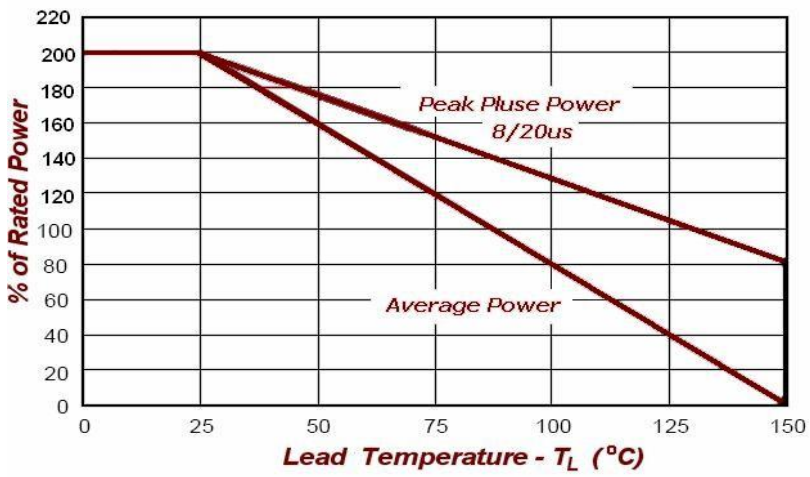
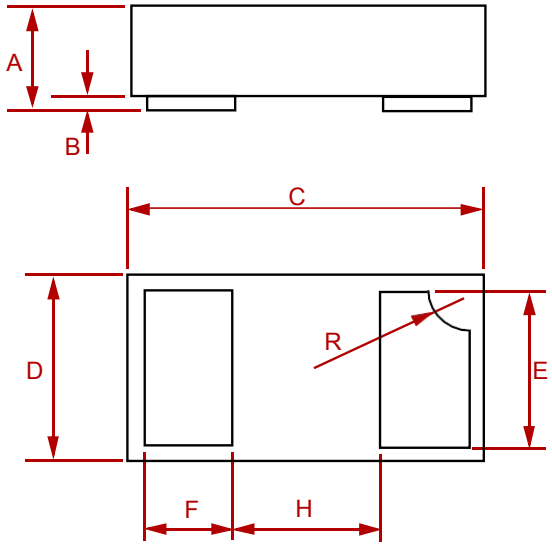


FIG2:Power Derating

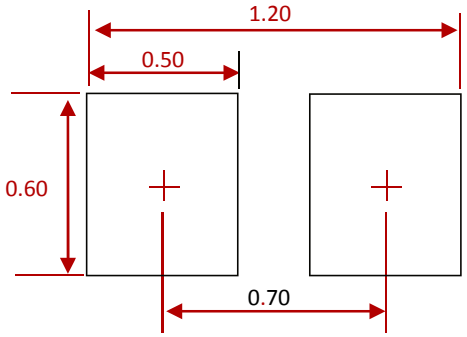


PACKAGE MECHANICAL DATA



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.0125	0.02	0.32	0.52
B	0.000	0.002	0.00	0.05
C	0.037	0.043	0.95	1.080
D	0.022	0.027	0.55	0.680
E	0.016	0.024	0.40	0.60
F	0.008	0.012	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15

Suggested Pad Layout



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

P/N	PKG	QTY
ST0541D4-MS	DFN1006	10000

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