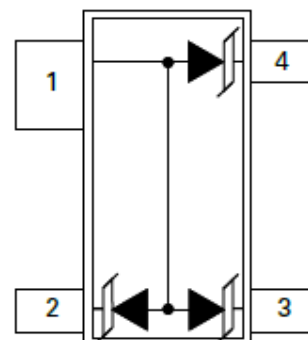


Features

- ◆ 150 Watts peak pulse power ($t_p = 8/20\mu s$)
- ◆ Transient protection for high speed data lines to IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Protects two bidirectional line or four unidirectional lines
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology



SOT143

Applications

- ◆ Notebooks, Desktops, Servers and Video Graphics Cards
- ◆ USB Power & Data Line Protection
- ◆ Monitors and Flat Panel Displays
- ◆ I²C Bus Protection
- ◆ Portable Instrumentation
- ◆ Set Top Box

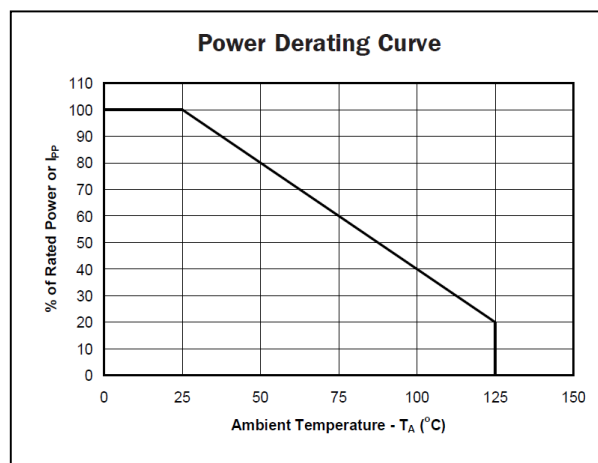
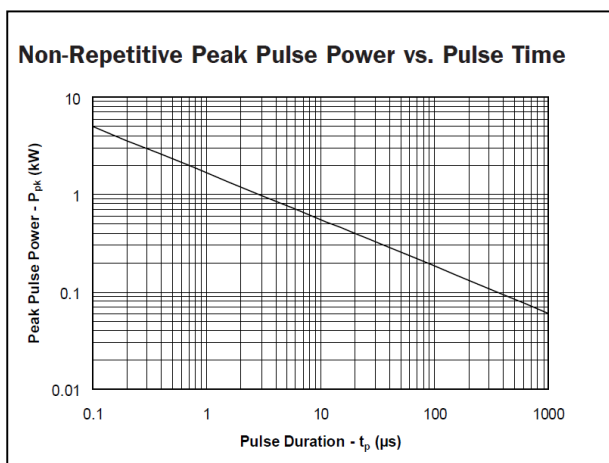
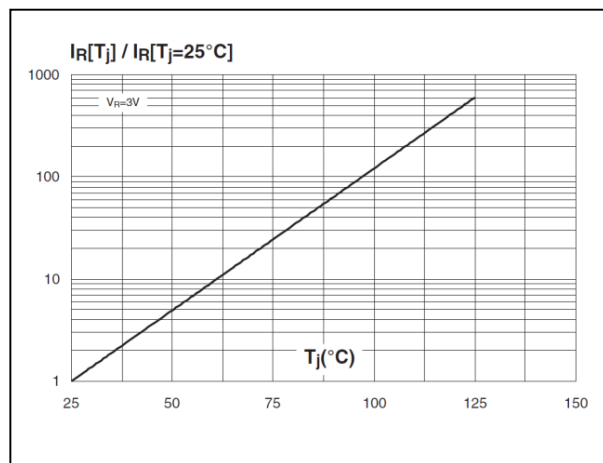
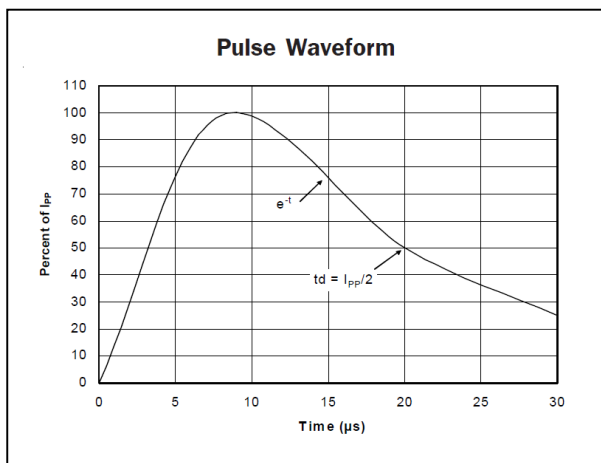
Maximum Rating @ $T_a = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Ratings	Units
P_{PK}	Peak Pulse Power ($t_p = 8/20\mu s$)	150	Watts
T_L	Lead Soldering Temperature	260(10sec.)	$^\circ C$
T_J	Operating Temperature	-55 to +125	$^\circ C$
T_{STG}	Storage Temperature	-55 to +150	$^\circ C$

Electrical Characteristics@ Ta=25°C unless otherwise

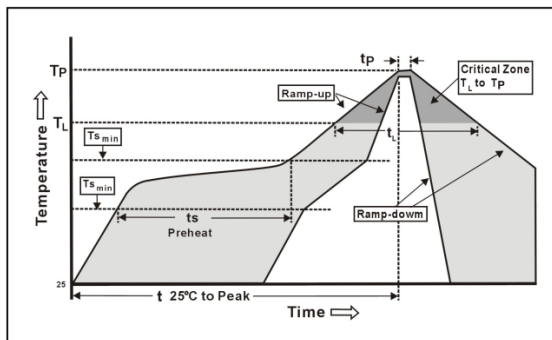
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_{RWM}	Reverse Working Voltage	Any I/O to Ground			5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$, Any I/O to Ground	6.0			V
I_R	Reverse Leakage Current	$V_{RWM} = 5V$, Any I/O to Ground			1	μA
V_C	Clamping Voltage	$I_{PP} = 1A$, $t_p = 8/20\mu s$, any I/O pin to Ground			10	V
		$I_{PP} = 10A$, $t_p = 8/20\mu s$, any I/O pin to Ground			15	V
C_J	Junction Capacitance	$V_R = 0V$, $f = 1MHz$, between I/O pins		40	50	pF
		$V_R = 0V$, $f = 1MHz$, any I/O pin to Ground		80	100	pF

Typical Characteristics@ Ta=25°C unless otherwise specified



Soldering Parameters

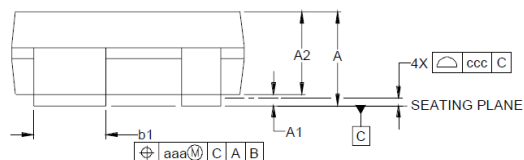
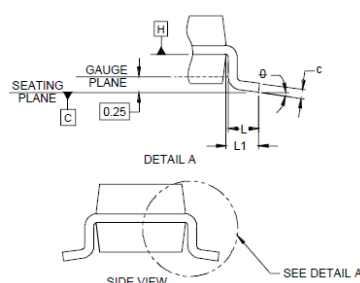
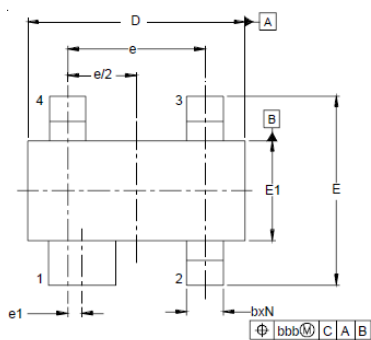
Reflow Condition		Fb – Free assembly
Pre Heat	- Temperature Min ($T_{s(Min)}$)	150°C
	- Temperature Max ($T_{s(Max)}$)	200°C
	- Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{s(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		250 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C



Package Outline

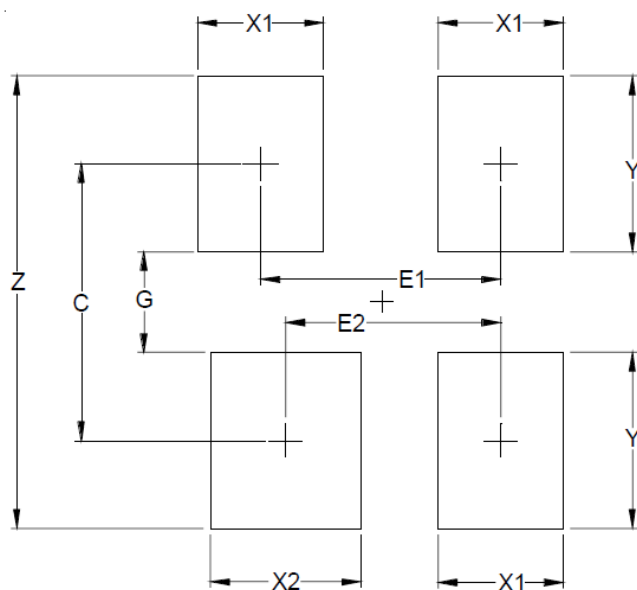
Plastic surface mounted package

SOT143



DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.031	-	.048	0.80	-	1.22
A1	.000	-	.006	0.013	-	0.15
A2	.029	.035	.042	0.75	0.90	1.07
b	.011	-	.020	0.30	-	0.51
b1	.029	-	.037	0.76	-	0.94
c	.003	-	.008	0.08	-	0.20
D	.110	.114	.120	2.80	2.90	3.04
E	.082	.093	.104	2.10	2.37	2.64
E1	.047	.051	.055	1.20	1.30	1.40
e		.075			1.92	BSC
e1		.008			0.20	BSC
L	.015	.020	.024	0.40	0.50	0.60
L1		(.021)			(0.54)	
N		4			4	
θ	0°	-	8°	0°	-	8°
aaa		.006			0.15	
bbb		.008			0.20	
ccc		.004			0.10	

Soldering Footprint



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.087)	(2.20)
E1	.076	1.92
E2	.068	1.72
G	.031	0.80
X1	.039	1.00
X2	.047	1.20
Y	.055	1.40
Z	.141	3.60