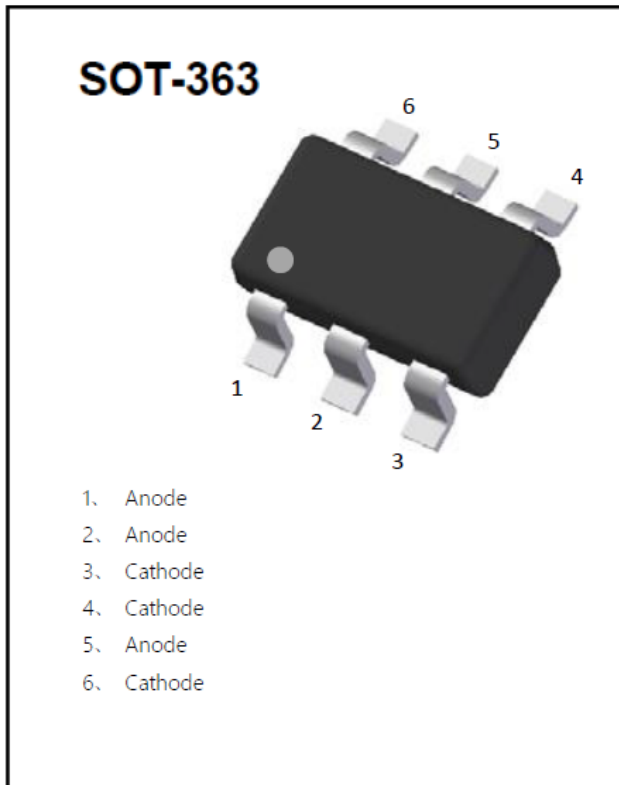


## Zener Diodes/Switching Diode



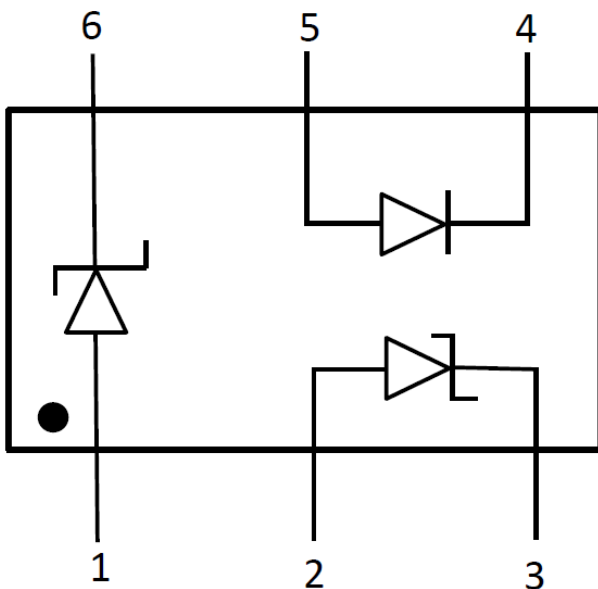
### Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- Moisture Sensitivity Level 1

### Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 13C48

### ■Equivalent circuit





# PTL13C48

## ■ Pin1、6&Pin2、3 Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation	$P_D$	mW	200
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	°C/W	625
Storage Temperature Range	$T_{stg}$	°C	-55~+150
Junction Temperature	$T_J$	°C	-55~+150

## ■ Pin1、6&Pin2、3 Electrical Characteristics (Ta=25°C unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	TYP	Max
Zener Voltage	VZ	V	$I_R=5mA$	12.4	13	14.1
Forward Voltage	$V_F$	V	$I_F=10mA$	-	-	0.9
Reverse Leakage Current	$I_{R1}$	uA	$V_R=8V$	-	-	0.1
Zener Impedance	$Z_{ZT}$	$\Omega$	$I_{ZT}=5mA$	-	-	30
	$Z_{Zk}$	$\Omega$	$I_{Zk}=1mA$	-	-	170

## ■ Pin4、5 Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Repetitive peak reverse voltage	$V_{RRM}$	V		100
Reverse voltage	$V_R$	V		100
Peak forward surge current	$I_{FSM}$	A	Pulse width=1 us Pulse width=1 s	2 0.5
Average forward current	$I_{FAV}$	mA		150
Power dissipation	$P_D$	mW		200
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	°C/W		625
Maximum junction temperature	$T_j$	°C		-55 ~+150
Storage temperature range	$T_{stg}$	°C		-55 ~+150



# PTL13C48

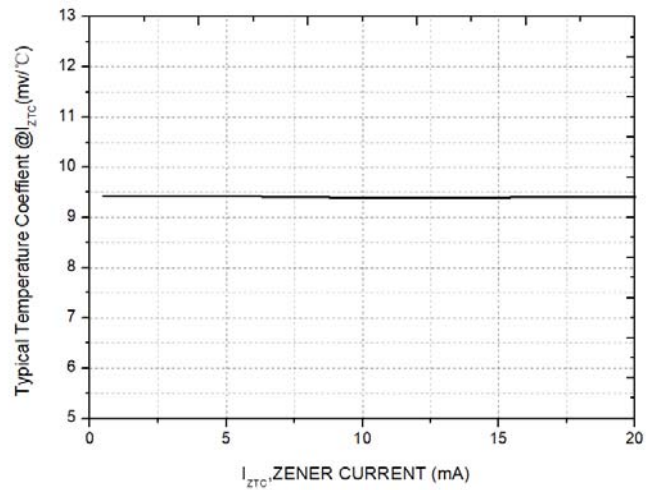
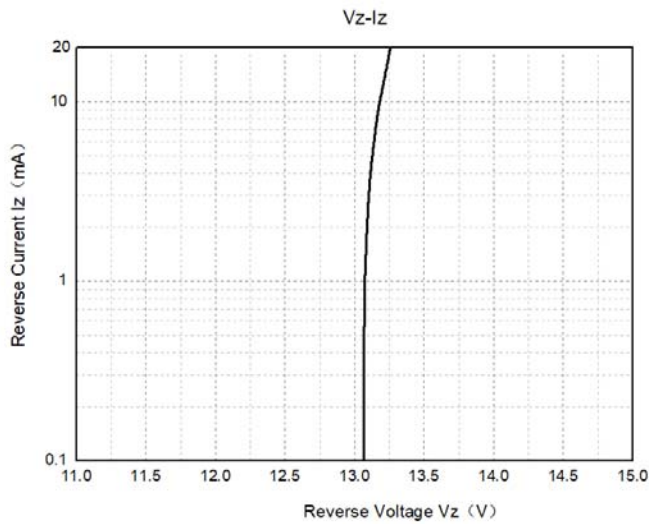
## ■ Pin4、 5 Electrical Characteristics (Ta=25°C unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Max
Breakdown Voltage	$V_R$	V	$I_R=100\mu A$	100	-
Forward Voltage	$V_F$	V	$I_F=1mA$	-	0.715
			$I_F=10mA$	-	0.855
			$I_F=50mA$	-	1
			$I_F=150mA$	-	1.25
Reverse Leakage Current	$I_{R1}$	nA	$V_R=20V$	-	25
	$I_{R2}$	$\mu A$	$V_R=75V$	-	1
Capacitance	C	pF	$V_R=0V, f=1MHz$	-	4
Reverse Recovery Time	$T_{RR}$	ns	$I_F=10mA, I_{rr}=1mA$	-	4

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PTL13C48	F2	Approximate 0.009g	3000	30000	120000	7" reel

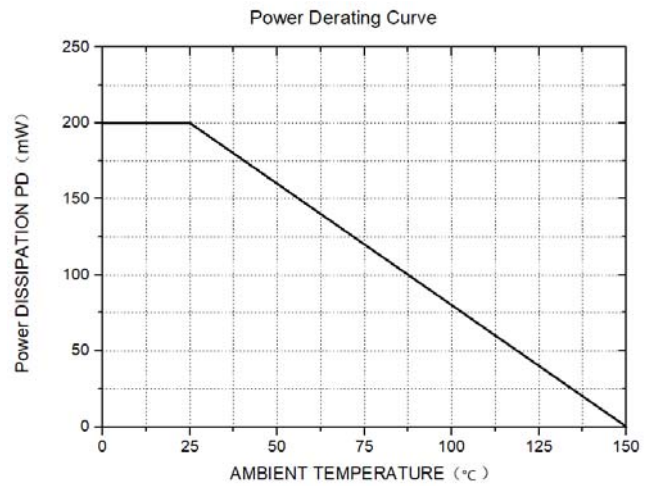
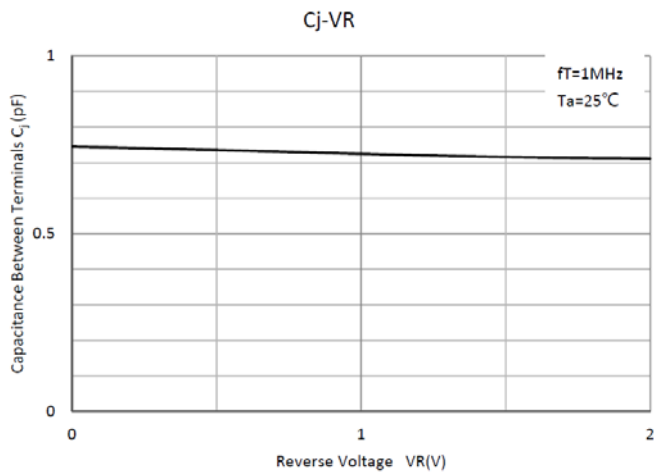
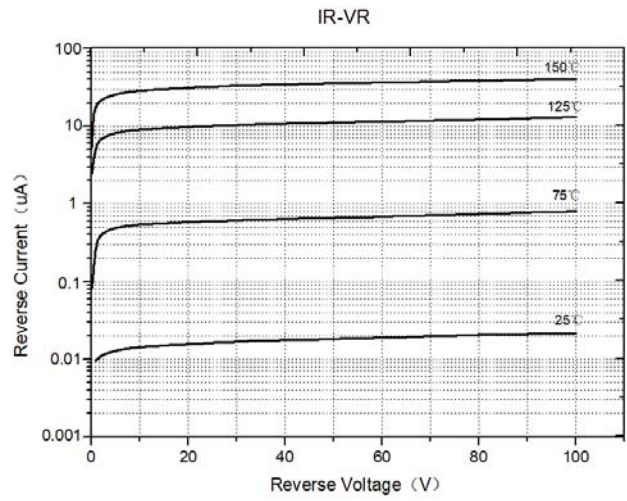
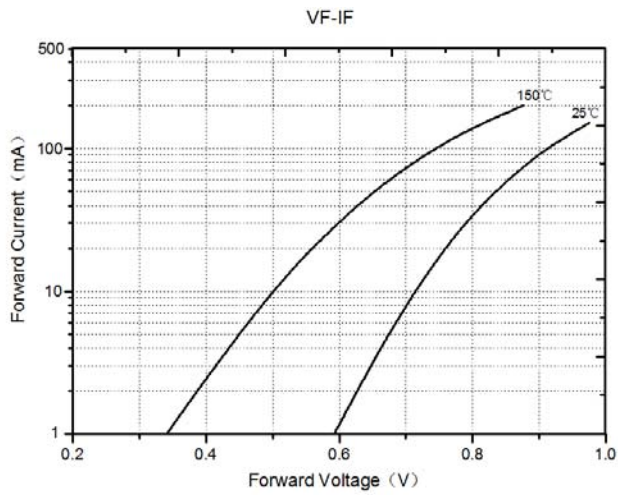
## ■ Pin1、 6&Pin2、 3 Electrical Characteristics (Typical)





# PTL13C48

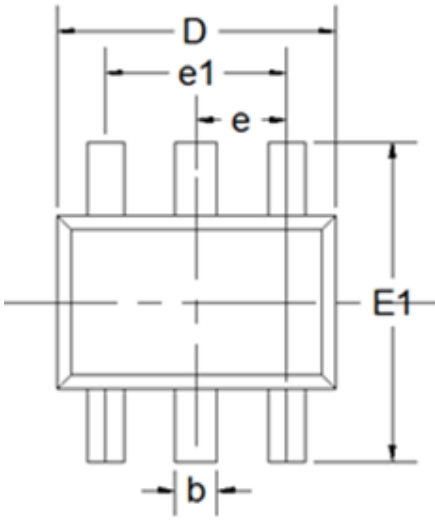
## ■ Pin4、5 Electrical Characteristics (Typical)



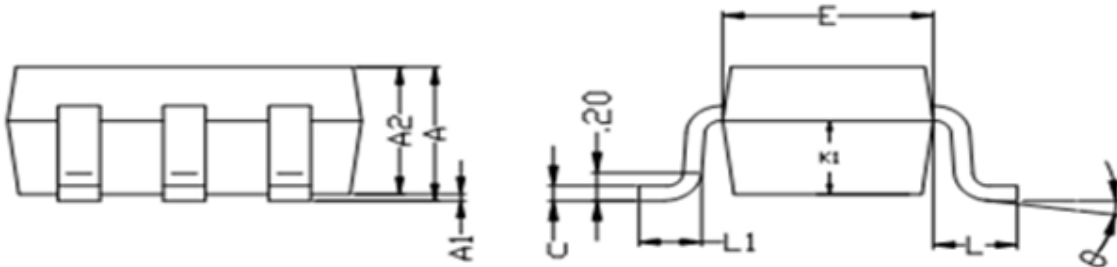


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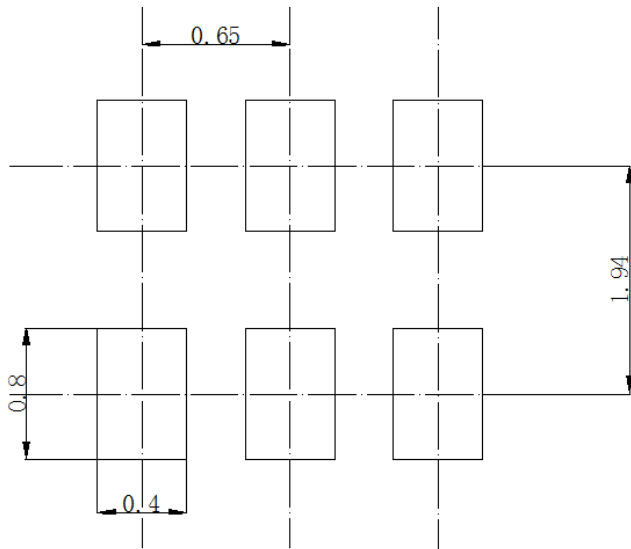
## ■SOT-363 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.035	0.043	0.9	1.1
A1	0	0.004	0	0.1
A2	0.035	0.039	0.9	1
b	0.006	0.014	0.15	0.35
c	0.002	0.01	0.05	0.25
D	0.071	0.087	1.8	2.2
E	0.045	0.053	1.15	1.35
E1	0.085	0.096	2.15	2.45
e	0.026Typ		0.65Typ	
e1	0.047	0.055	1.2	1.4
L	0.021Typ		0.525Typ	
L1	0.01	0.018	0.26	0.46
φ	0°	8°	0°	8°



## ■SOT-363 Soldering Footprint



Unit: mm



## PTL13C48

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