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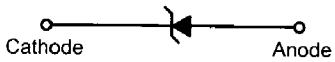
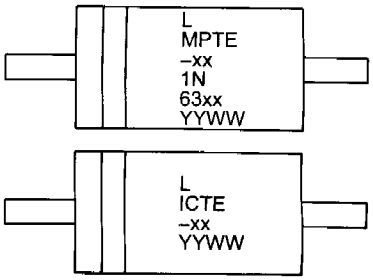
1N6373 - 1N6381 Series (ICTE-5 - ICTE-36, MPTE-5 - MPTE-45)

1500 Watt Peak Power Mosorb™ Zener Transient Voltage Suppressors



AXIAL LEAD
CASE 41A
PLASTIC



Specification Features:

- Working Peak Reverse Voltage Range – 5 V to 45 V
- Peak Power – 1500 Watts @ 1 ms
- ESD Rating of Class 3 (>16 KV) per Human Body Model
- Maximum Clamp Voltage @ Peak Pulse Current
- Low Leakage < 5 μA Above 10 V
- Response Time is Typically < 1 ns

Mechanical Characteristics:

CASE: Void-free, transfer-molded, thermosetting plastic
FINISH: All external surfaces are corrosion resistant and leads are readily solderable
MAXIMUM LEAD TEMPERATURE FOR SOLDERING PURPOSES: 230°C, 1/16″ from the case for 10 seconds
POLARITY: Cathode indicated by polarity band
MOUNTING POSITION: Any

MAXIMUM RATINGS

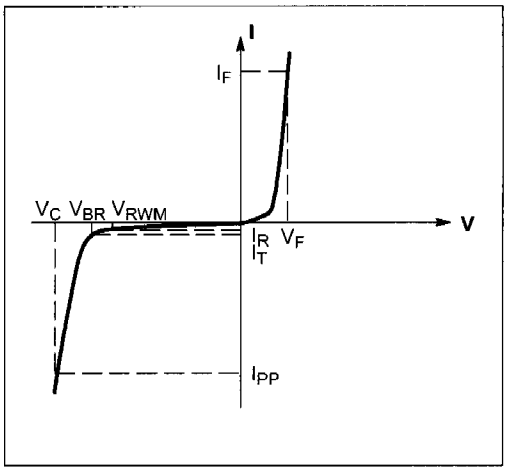
Rating	Symbol	Value	Unit
Peak Power Dissipation (Note 1.) @ $T_L \le 25°C$	P_{PK}	1500	Watts
Steady State Power Dissipation @ $T_L \le 75°C$, Lead Length = 3/8″	P_D	5.0	Watts
Derated above $T_L = 75°C$		20	mW/°C
Thermal Resistance, Junction–to–Lead	$R_{\theta JL}$	20	°C/W
Forward Surge Current (Note 2.) @ $T_A = 25°C$	I_{FSM}	200	Amps
Operating and Storage Temperature Range	T_J, T_{stg}	– 65 to +175	°C

*Please see 1N6382 – 1N6389 (ICTE–10C – ICTE–36C, MPTE–8C – MPTE–45C) for Bidirectional Devices

1N6373 – 1N6381 Series (ICTE–5 – ICTE–36, MPTE–5 – MPTE–45)

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 3.5 V Max. @ I_F (Note 3.) = 100 A)

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}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
ΘV_{BR}	Maximum Temperature Variation of V_{BR}
I_F	Forward Current
V_F	Forward Voltage @ I_F



Uni–Directional TVS

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 3.5 V Max. @ I_F (Note 3.) = 100 A)

JEDEC Device (ON Device)	Device Marking	V_{RWM} (Note 4.)	I_R @ V_{RWM}	Breakdown Voltage				V_C @ I_{PP} (Note 6.)		V_C (Volts) (Note 6.)		ΘV_{BR}
				V_{BR} (Note 5.) (Volts)			@ I_T	V_C	I_{PP}	@ I_{PP} = 1 A	@ I_{PP} = 10 A	
		(Volts)	(μA)	Min	Nom	Max	(mA)	(Volts)	(A)			(mV/°C)
1N6373 (MPTE–5)	1N6373 MPTE–5	5.0	300	6.0	–	–	1.0	9.4	160	7.1	7.5	4.0
1N6374 (MPTE–8)	1N6374 MPTE–8	8.0	25	9.4	–	–	1.0	15	100	11.3	11.5	8.0
1N6375 (MPTE–10)	1N6375 MPTE–10	10	2.0	11.7	–	–	1.0	16.7	90	13.7	14.1	12
1N6376 (MPTE–12)	1N6376 MPTE–12	12	2.0	14.1	–	–	1.0	21.2	70	16.1	16.5	14
1N6377 (MPTE–15)	1N6377 MPTE–15	15	2.0	17.6	–	–	1.0	25	60	20.1	20.6	18
1N6378* (MPTE–18)	1N6378* MPTE–18	18	2.0	21.2	–	–	1.0	30	50	24.2	25.2	21
1N6379 (MPTE–22)	1N6379 MPTE–22	22	2.0	25.9	–	–	1.0	37.5	40	29.8	32	26
1N6380 (MPTE–36)	1N6380 MPTE–36	36	2.0	42.4	–	–	1.0	65.2	23	50.6	54.3	50
1N6381 (MPTE–45)	1N6381 MPTE–45	45	2.0	52.9	–	–	1.0	78.9	19	63.3	70	60
ICTE–5	ICTE–5	5.0	300	6.0	–	–	1.0	9.4	160	7.1	7.5	4.0
ICTE–10	ICTE–10	10	2.0	11.7	–	–	1.0	16.7	90	13.7	14.1	8.0
ICTE–12	ICTE–12	12	2.0	14.1	–	–	1.0	21.2	70	16.1	16.5	12
ICTE–15	ICTE–15	15	2.0	17.6	–	–	1.0	25	60	20.1	20.6	14
ICTE–18	ICTE–18	18	2.0	21.2	–	–	1.0	30	50	24.2	25.2	18
ICTE–22	ICTE–22	22	2.0	25.9	–	–	1.0	37.5	40	29.8	32	21
ICTE–36	ICTE–36	36	2.0	42.4	–	–	1.0	65.2	23	50.6	54.3	26