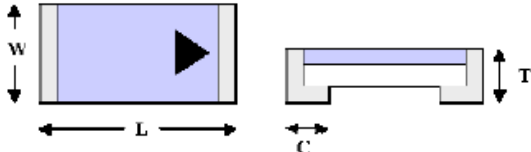
		TS4148																							
0.35 / 0.5AMPS High Speed Switching Diode		Voltage Range 100 Volts Current 0.35 / 0.5 Ampere																							
Features <ul style="list-style-type: none"> ✧ For surface mounted application ✧ Low forward voltage drop ✧ High Current capability ✧ Fast switching for high efficiency ✧ High surge current capability ✧ Chip version in 1206 and 0805, 0603 ✧ High temperature soldering: 260°C / 10 seconds at terminals 																									
Mechanical Data <ul style="list-style-type: none"> ✧ Cases: 1206, 0805 or 0603 ✧ Terminals: Tin plated ✧ Polarity: indicated by cathode arrow ✧ Packaging: 8 mm tape per EIA STD RS-481 		<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Item</th> <th>1206</th> <th>0805</th> <th>0603</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>0.135(3.40) 0.119(3.0)</td> <td>0.088(2.20) 0.072(1.8)</td> <td>0.071(1.65) 0.59(1.45)</td> </tr> <tr> <td>W</td> <td>0.07(1.70) 0.054(1.30)</td> <td>0.058(1.45) 0.042(1.05)</td> <td>0.039(0.9) 0.027(0.7)</td> </tr> <tr> <td>T</td> <td>0.038(0.95) 0.03(0.75)</td> <td>0.038(0.95) 0.03(0.75)</td> <td>0.034(0.75) 0.026(0.55)</td> </tr> <tr> <td>C</td> <td>0.03(0.75) 0.014(0.35)</td> <td>0.026(0.65) 0.01(0.25)</td> <td>0.018(0.45) 0.010(0.25)</td> </tr> </tbody> </table> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>				Item	1206	0805	0603	L	0.135(3.40) 0.119(3.0)	0.088(2.20) 0.072(1.8)	0.071(1.65) 0.59(1.45)	W	0.07(1.70) 0.054(1.30)	0.058(1.45) 0.042(1.05)	0.039(0.9) 0.027(0.7)	T	0.038(0.95) 0.03(0.75)	0.038(0.95) 0.03(0.75)	0.034(0.75) 0.026(0.55)	C	0.03(0.75) 0.014(0.35)	0.026(0.65) 0.01(0.25)	0.018(0.45) 0.010(0.25)
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Maximum Ratings and Electrical Characteristics																									
Rating at 25°C ambient temperature unless otherwise specified.																									
Single phase, half wave, 60 Hz, resistive or inductive load.																									
For capacitive load, derate current by 20%																									
Type Number	Symbol	0603	1206	0805	Units																				
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100			V																				
Reverse Voltage	V_R	75			V																				
Maximum Average Forward Rectified Current Resistive Load $f > 50\text{Hz}$	$I_{F(AV)}$	150			mA																				
Peak Forward Surge Current 8.3 ms Half Sine-wave 1 μs	I_{FSM}	350	500		mA																				
Maximum Instantaneous Forward Voltage @100mA	V_F	2.0			A																				
Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ $V_R=20\text{V}$ at Rated DC Blocking Voltage @ $T_c=125^\circ\text{C}$ $V_R=20\text{V}$	I_R	1.0			V																				
Typical Reverse Recovery Time(Note 2) $T_J=25^\circ\text{C}$	T_{rr}	5.0			nS																				
Typical Junction Capacitance (Note 1)	C_j	1.55	1.65	1.60	pF																				
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$	200 105	190 80	150 60	$^\circ\text{C}/\text{W}$																				
Power Dissipation	P_D	350	500		mW																				
Operating Junction Temperature Range	T_J	-65 to + 200			$^\circ\text{C}$																				
Storage Temperature Range	T_{STG}	-65 to + 200			$^\circ\text{C}$																				

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, Recover to 0.25A.



RATINGS AND CHARACTERISTIC CURVES (TS4148)

FIG.1- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

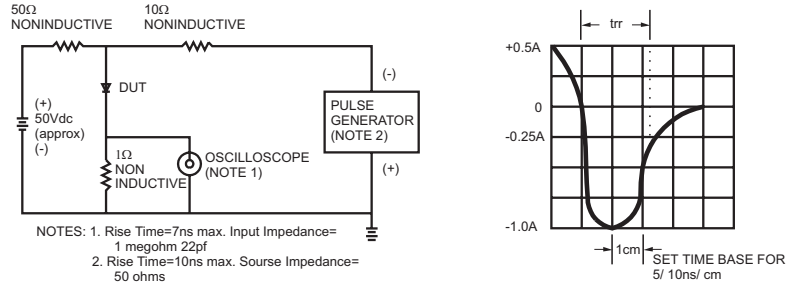


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

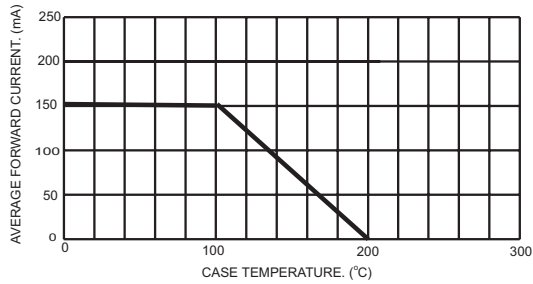


FIG.3- TYPICAL REVERSE CHARACTERISTICS

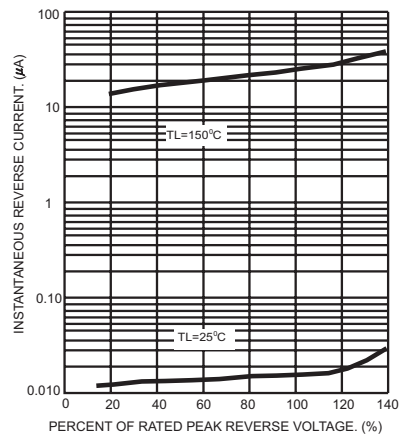


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

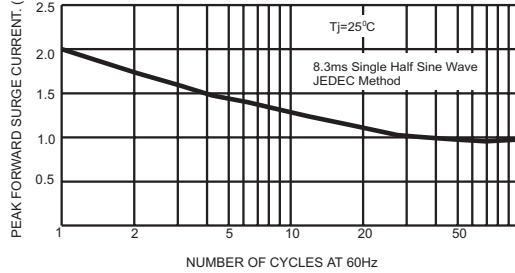


FIG.6- TYPICAL FORWARD CHARACTERISTICS

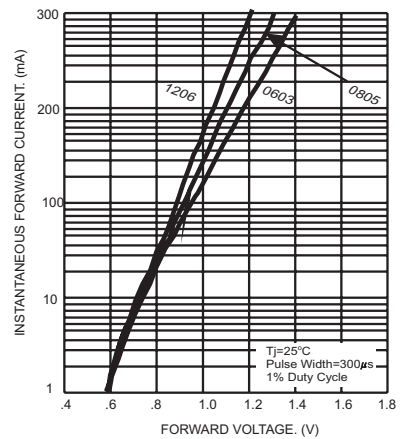


FIG.5- TYPICAL JUNCTION CAPACITANCE

