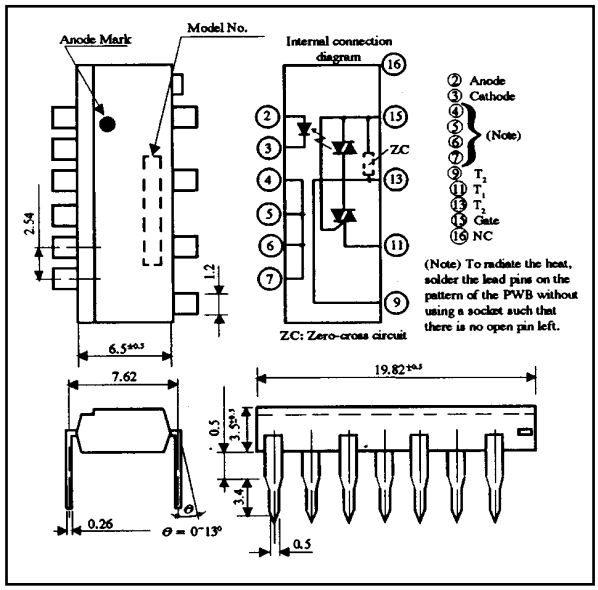
SOLID STATE RELAYS - 16 PIN PACKAGE

ISRT164012 / ISRT166012
ISRX164012 / ISRX166012

PACKAGE DRAWING (dimensions in mm)



Features

Compact Package - 16 Pin DIP
High Off-State Voltage 400 / 600 V
Zero-cross Option - ISRX Series
High Isolation - 5000Vrms
1.2 Arms On-state Current

Available Types

Function	I_{MAX}	120Vac	240Vac
Non-zero-cross	1.2A	ISRT164012	ISRT166012
Zero-cross	1.2A	ISRX164012	ISRX166012

Absolute Maximum Ratings (25°C unless otherwise stated)

PARAMETER			RATING		UNIT
			ISRT84006 ISRX84006	ISRT86006 ISRX86006	
Input	Forward Current	I_F	50	50	mA
	Reverse Current	V_R	6	6	V
Output	RMS on-state current	I_T	1.2	1.2	A_{RMS}
	Peak one cycle surge current *1	I_S	12	12	A
	Repetitive peak off-state Voltage	V_{DRM}	400	600	V
Isolation Voltage *2		V_{ISO}	5000	5000	V_{RMS}
Operating Temperature		T_{OPR}	-25 / +80	-25 / +80	°C
Storage Temperature		T_{STG}	-40 / +125	-40 / +125	°C
Soldering Temperature		T_{SOL}	260	260	°C

*1 50Hz sine wave, T_j = 25 °C start
*2 50/60 Hz AC 1 minute between input and output, zero-cross switching dielectric tester, input shorted, output shorted.

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ELECTRICAL CHARACTERISTICS (25oC unless otherwise stated)

PARAMETER			CONDITION	MIN	TYP	MAX	UNIT
Input	Forward Voltage	V_F	I_F = 20mA		1.2	1.4	V
	Reverse Current	I_R	V_R = 3V			10^{-5}	A
Output	Repetitive off-state Current	I_{DRM}	$V_D = V_{DRM}$ (Rated)			10^{-4}	A
	On-state Voltage	V_T	I_T = 1.2A			1.7	V
	Holding Current	I_H	R_L = 100R			25	mA
	Critical rate of rise of off-state Voltage 400V series	dv/dt	V_D = 0.7 X 400V	200			V/us
	Critical rate of rise of off-state Voltage 600V Series		V_D = 0.7 X 600V	100			V/us
	Zero-cross Voltage	V_{OX}	I_F = 6V, RL = 100R			35	V
	Minimum Trigger Current	I_{FT}	V_D = 6V, R_L = 100R			10	mA
Transfer characteristics	Isolation Resistance	R_{ISO}	500VDC, RH = 40-60%	$5x10^{10}$	10^{11}		ohms
	Turn-on Time	T_{ON}	V_D=6V, R_L=100R, I_F=20mA			100	us

Fig.1 RMS On-state Current vs. Ambient Temperature

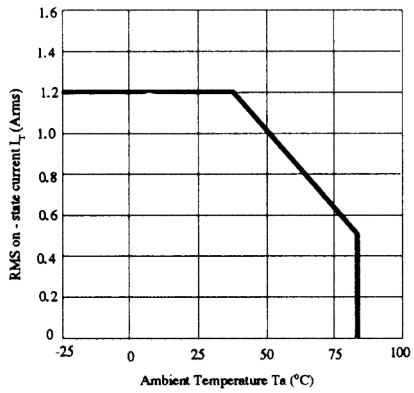

Fig.2 Forward Current vs. Ambient Temperature

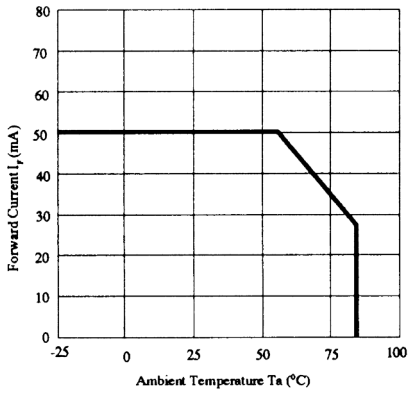

Fig.3 Forward Current vs. Forward Voltage

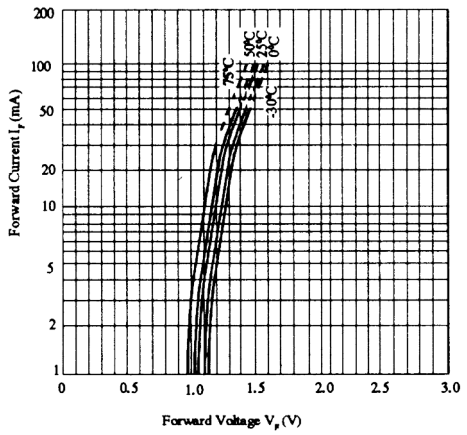

Fig.4 On - state Current vs. On - state Voltage