

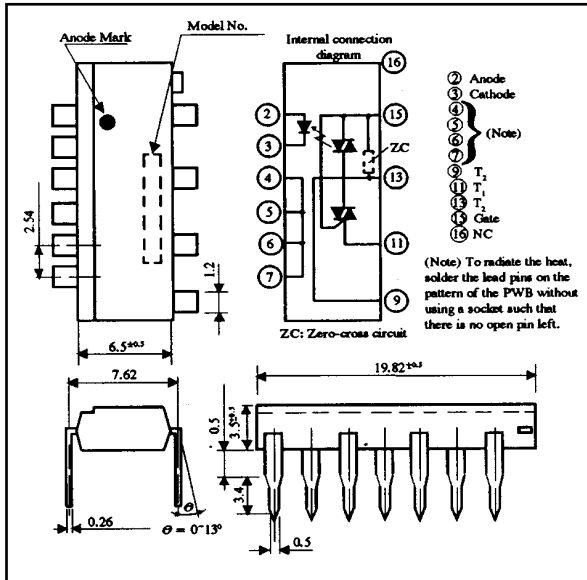
SOLID STATE RELAYS - 16 PIN PACKAGE



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 (25°C unless otherwise stated)

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

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

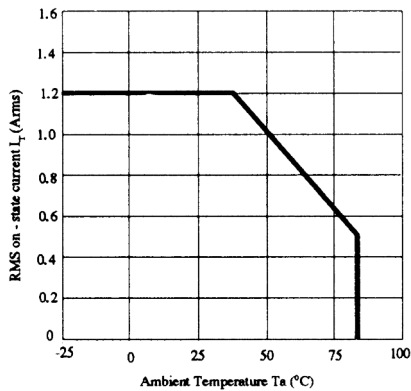


Fig.2 Forward Current vs. Ambient Temperature

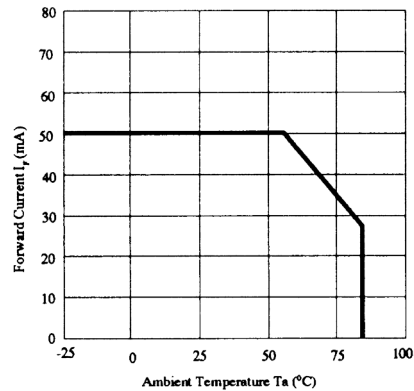


Fig.3 Forward Current vs. Forward Voltage

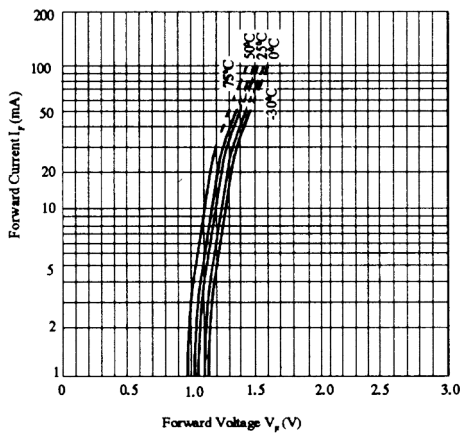


Fig.4 On - state Current vs. On - state Voltage

