



Z00607

Preliminary

TRIAC

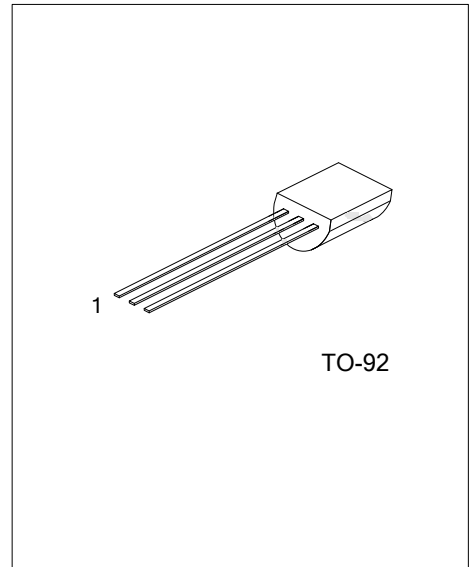
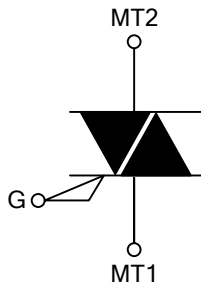
0.8A TRIACS

DESCRIPTION

The UTC Z00607 is a 0.8A triacs, it uses UTC's advanced technology to provide customers with low gate trigger current.

The UTC Z00607 is suitable for low power AC switching applications and driving microcontrollers.

SYMBOL



ORDERING INFORMATION

Table with columns: Ordering Number (Lead Free, Halogen Free), Package, Pin Assignment (1, 2, 3), and Packing. Rows include Z00607L-T92-B, Z00607G-T92-B, Z00607L-T92-K, and Z00607G-T92-K.

Ordering code breakdown for Z00607G-T92-B: (1) Packing Type, (2) Package Type, (3) Halogen Free. Legend: (1) B: Tape Box, K: Bulk; (2) T92: TO-92; (3) G: Halogen Free, L: Lead Free.

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER			SYMBOL	RATINGS	UNIT	
Repetitive Peak Off-State Voltage			V_{DRM}	600	V	
RMS On-State Current (Full Sine Wave)		$T_{MB}=50^{\circ}C$	$I_{T(RMS)}$	0.8	A	
Non Repetitive Surge Peak On-State Current (Full Cycle, T_J initial= $25^{\circ}C$)	F=50Hz	t=20ms	I_{TSM}	9	A	
	F=60Hz	t=16.7ms		9.5		
I^2t Value for Fusing	t _p =10ms		I^2_t	0.45	A ² s	
Critical Rate of Rise of On-State Current $I_G=2 \times I_{GT}$, t _r ≤100ns		F=120Hz	$T_J=110^{\circ}C$	dI/dt	20	A/μs
Peak Gate Current	t _p =20μs	$T_J=110^{\circ}C$	I_{GM}	1	A	
Average Gate Power Dissipation		$T_J=110^{\circ}C$	$P_{G(AV)}$	0.1	W	
Operating Junction Temperature Range			T_J	-40~+110	°C	
Storage Junction Temperature Range			T_{STG}	-40~+150	°C	

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Lead (AC)	θ_{JLEAD}	60	°C/W
Junction to Ambient	θ_{JA}	150	°C/W

■ ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Trigger Current (Note 1)	I_{GT}	$V_D=12V, R_L=30\Omega$	I-II-III		5	mA
			IV		7	
Gate Trigger Voltage	V_{GT}				1.3	V
Gate Non-Trigger Voltage	V_{GD}	$V_D=V_{DRM}, R_L=3.3K\Omega, T_J=110^{\circ}C$	ALL	0.2		V
Holding Current (Note 2)	I_H	$I_T=200mA$			5	mA
Latching Current	I_L	$I_G=1.2I_{GT}$	I-III-IV		10	mA
			II		20	
Critical Rate of Rise of Off-State Voltage (Note 2)	dV/dt	$V_D=67\%V_{DRM}$, Gate Open, $T_J=110^{\circ}C$	10			V/μs
Critical Rate of Rise of Off-State Voltage at Commutation (Note 2)	(dV/dt) _c	(dV/dt) _c =0.35A/ms, $T_J=110^{\circ}C$	1.5			V/μs
Peak On-State Voltage (Note 2)	V_{TM}	$I_{TM}=1.1A, t_p=380\mu s$	$T_J=25^{\circ}C$		1.5	V
Threshold Voltage (Note 2)	V_{TO}		$T_J=110^{\circ}C$		0.95	V
Dynamic Resistance (Note 2)	R_D		$T_J=110^{\circ}C$		420	mΩ
Repetitive Peak Off-State Current	I_{DRM}	$V_{DRM}=V_{RRM}=600V$	$T_J=25^{\circ}C$		5	μA
	I_{RRM}		$T_J=110^{\circ}C$		0.1	mA

Notes: 1. Minimum I_{GT} is guaranteed at 5% of I_{GT} max.

2. For both polarities of MT2 referenced to MT1.

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