



## Z00607

Preliminary

**TRIAC**

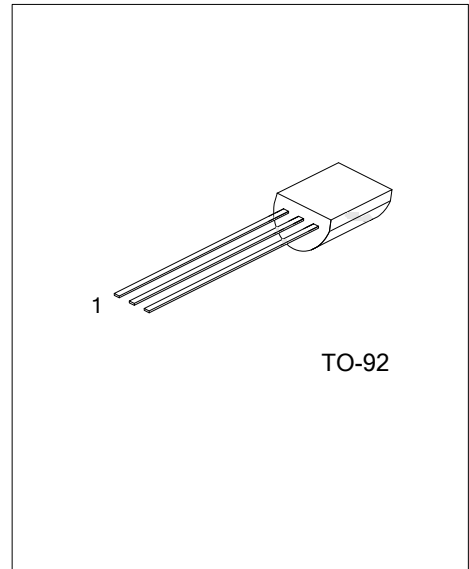
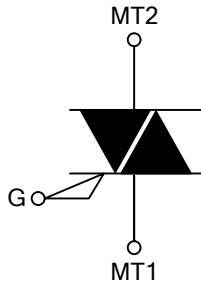
### 0.8A TRIACS

#### 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

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
Z00607L-T92-B	Z00607G-T92-B	TO-92	MT1	GATE	MT2	Tape Box
Z00607L-T92-K	Z00607G-T92-K	TO-92	MT1	GATE	MT2	Bulk

<p>Z00607G-T92-B</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Halogen Free</p>	<p>(1) B: Tape Box, K: Bulk</p> <p>(2) T92: TO-92</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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### ■ 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 <sub>p</sub> =10ms		$I^2_t$	0.45	A <sup>2</sup> s	
Critical Rate of Rise of On-State Current $I_G=2 \times I_{GT}$ , t <sub>r</sub> ≤100ns		F=120Hz	$T_J=110^{\circ}C$	dI/dt	20	A/μs
Peak Gate Current	t <sub>p</sub> =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)	$\theta_{JLEAD}$	60	°C/W
Junction to Ambient	$\theta_{JA}$	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) <sub>c</sub>	(dV/dt) <sub>c</sub> =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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