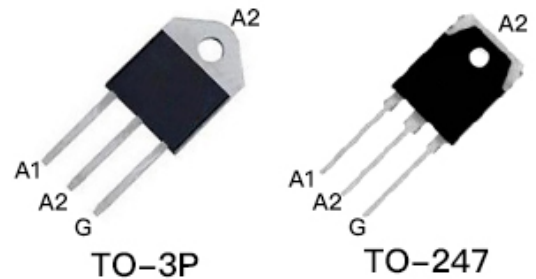


Description

Available in high power packages, the suitable for general purpose AC switching.

Features

- High current TRIAC
- Low thermal resistance with clip bonding
- High commutation capability



Applications

- General purpose AC switch control
- Control loads in Motor, Fan, and Pump.
- Solenoid drivers
- LED Dimming
- Inrush current limiting circuits



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$)

Rating		Symbol	Value
Peak repetitive off-state voltage ($T_J = -40$ to $+125^\circ\text{C}$, Full sine wave, 50Hz to 60Hz; Gate open) (Note 1)		V_{DRM} V_{RRM}	800V
On-state RMS current (full sine wave)		$I_{\text{T(RMS)}}$	40A
Non repetitive surge peak on-state current (full cycle, $T_{\text{initial}} = 25^\circ\text{C}$)	F=50Hz, t=20ms	I_{TSM}	380A
	F=60Hz, t=16.7ms		400A
I^2t Value for fusing	$t_p=10\text{ms}$	I^2t	600A ² s
Critical rate of rise of on-state current $I_G=2I_{\text{GT}}$	F=120Hz, $T_J=125^\circ\text{C}$	di/dt	80A/ μs
Non repetitive surge peak off-state voltage	$t_p=10\text{ms}$, $T_J=25^\circ\text{C}$	$V_{\text{DSM}}/V_{\text{RSM}}$	$V_{\text{DRM}}/V_{\text{RRM}}+100\text{V}$
Peak gate current	$t_p=20\mu\text{s}$, $T_J=125^\circ\text{C}$	I_{GM}	8A
Average gate power dissipation	$T_J=125^\circ\text{C}$	$P_{\text{G(AV)}}$	4W
Operating junction and storage temperature ranges		T_J, T_{STG}	-40°C to $+150^\circ\text{C}$

Note:

1. V_{DRM} and V_{RRM} for all types can be applied on a continuous basis.

Blocking voltages shall not be tested with a constant current source such that the voltage ratings of the devices are exceeded.

Electrical Characteristics ($T_J=25^{\circ}\text{C}$, unless otherwise specified)

Parameter		Symbol	Value	
$V_D=12\text{V}, R_L=33\Omega$	I-II-III	$I_{GT \text{ Max.}}$	35mA	50mA
	ALL	$V_{GT \text{ Max.}}$	1.2V	1.2V
$V_D=V_{DRM}, R_L=100\Omega, T_J=150^{\circ}\text{C}$	ALL	$V_{GD \text{ Min.}}$	0.2V	0.2V
$I_T=100\text{mA}$		$I_H \text{ Max.}^{(1)}$	50mA	75mA
$I_G=1.2I_{GT}$	I-III	$I_L \text{ Max.}$	60mA	80mA
	II		80mA	100mA
$V_D=67\%V_{DRM}$ gate open, $T_J=125^{\circ}\text{C}$		$I_H \text{ Max.}^{(1)}$	500V/ μs	1000V/ μs

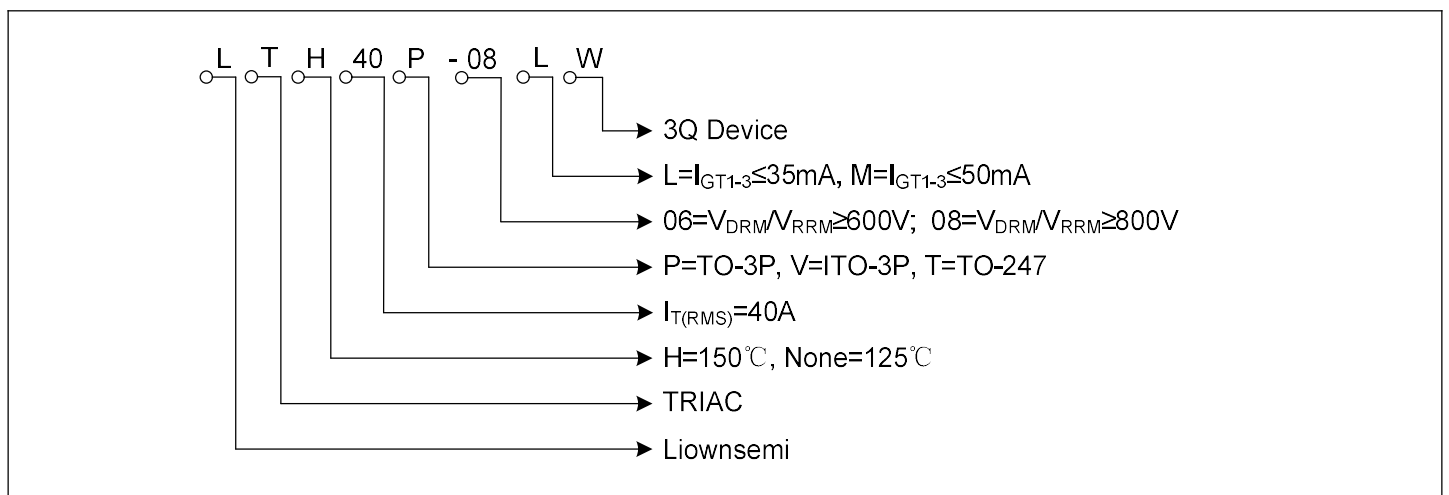
1. for both polarities of A2 referenced to A1

Static Characteristics

Test conditions	Symbol	Value
$I_{TM}=40\text{A}, t_P=380\mu\text{s}, T_J=25^{\circ}\text{C}$	$V_T \text{ Max.}^{(1)}$	1.5V
Threshold voltage, $T_J=150^{\circ}\text{C}$	$V_{T0 \text{ Max.}}^{(1)}$	0.9V
Dynamic resistance, $T_J=150^{\circ}\text{C}$	$R_D \text{ Max.}^{(1)}$	17m Ω
$V_{DRM}=V_{RRM}, T_J=25^{\circ}\text{C}$	$I_{DRM \text{ Max.}}$	5 μA
$V_{DRM}=V_{RRM}, T_J=125^{\circ}\text{C}$	$I_{RRM \text{ Max.}}$	10mA

1. for both polarities of A2 referenced to A1

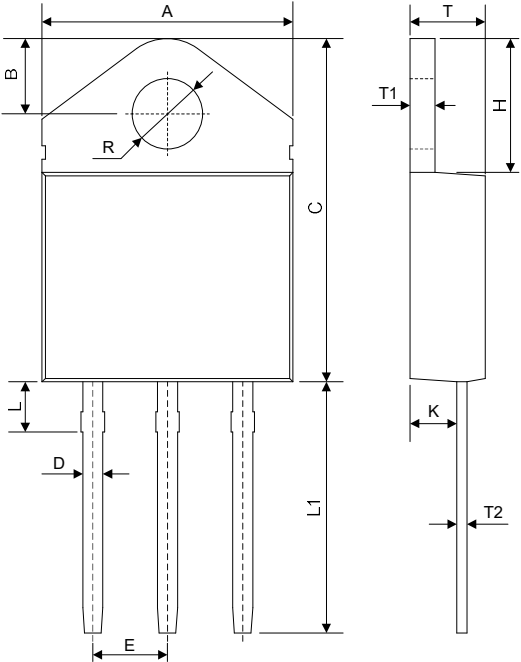
Part Number Code



Ordering Information

Part Number	Marking	Package
LTH40P-08LW	LTH40P-08LW	TO-3P
LTH40P-08MW	LTH40P-08MW	TO-3P
LTH40V-08LW	LTH40V-08LW	ITO-3P
LTH40V-08MW	LTH40V-08MW	ITO-3P
LTH40T-08LW	LTH40T-08LW	TO-247
LTH40T-08MW	LTH40T-08MW	TO-247

Dimensions

TO-3P	Symbol	Millimeters	
		Min.	Max.
	A	14.9	15.35
	B	4.1	4.65
	C	20.21	20.75
	D	1.12	1.32
	E	5.35	5.62
	H	7.85	8.22
	K	2.71	2.92
	L	2.5	3.2
	L1	15.02	15.55
	T	4.38	4.65
	T1	1.42	1.62
	T2	0.52	0.68
	ΦR	4.12	4.31

Dimensions

ITO-3P	Symbol	Millimeters	
		Min.	Max.
	A	14.9	15.35
	B	4.1	4.65
	C	20.21	20.75
	D	1.12	1.32
	E	5.35	5.62
	H	7.85	8.22
	K	2.71	2.92
	L	2.5	3.2
	L1	15.02	15.55
	T	4.38	4.65
	T1	1.42	1.62
	T2	0.52	0.68
	ΦR	4.12	4.31

TO-247	Symbol	Millimeters	
		Min.	Max.
	A	15.55	15.65
	B	4.90	5.10
	C	14.80	15.00
	D	1.00	
	D1	2.00	
	D2	2.95	3.05
	E	5.35	5.55
	F	2.90	3.10
	K	1.33	1.43
	L	20.00	20.20
	T	4.75	4.85
	T1	1.492	1.508
	T2	0.585	0.615
	ΦR	3.50	
$\Phi R1$	7.00		
$\Phi R2$	3.20		

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