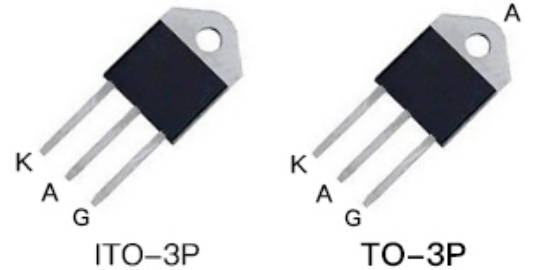


Description

Available in high power packages, the ITO-3P and TO-3P package.

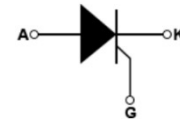
Features

- $I_{GT\ max.} = 50\ mA$
- Low thermal resistance with clip bonding
- Max. blocking voltage = $V_{DRM}, V_{RRM} = 800V$



Applications

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



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

Rating		Symbol	Value
Peak repetitive off-state voltage (50Hz to 60Hz; Gate open) (Note 1)		V_{DRM} V_{RRM}	800V
On-state RMS current (180° sine wave)		$I_{T(RMS)}$	55A
Non repetitive surge peak on-state current (full cycle, $T_{initial} = 25^\circ C$)	$F=50Hz, t=10ms$	I_{TSM}	300A
I^2t Value for fusing	$t_p=10ms$	I^2t	1800A ² s
Critical rate of rise of on-state current $I_G=2I_{GT}$	$F=120Hz, T_J=125^\circ C$	di/dt	200A/ μs
Non repetitive surge peak off-state voltage	$t_p=10ms, T_J=25^\circ C$	V_{DSM}/V_{RSM}	$V_{DRM}/V_{RRM}+100V$
Peak gate current	$t_p=20\mu s, T_J=125^\circ C$	I_{GM}	8A
Average gate power dissipation	$T_J=125^\circ C$	$P_{G(AV)}$	1W
Storage junction temperature range		T_{STG}	-40°C to +150°C
Operating junction temperature range		T_J	-40°C to +125°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_{GT}	10mA~50mA
$V_D=V_{DRM}, R_L=100\Omega, T_J=125^\circ\text{C}$	$V_{GD \text{ Min.}}$	0.2V
$I_T=500\text{mA}$	$I_{H \text{ Max.}}^{(1)}$	100mA
$I_G=1.2I_{GT}$	$I_{L \text{ Max.}}$	125mA
$V_D=67\%V_{DRM}$ gate open, $T_J=125^\circ\text{C}$	$dv/dt \text{ Min.}^{(1)}$	1500V/ μs

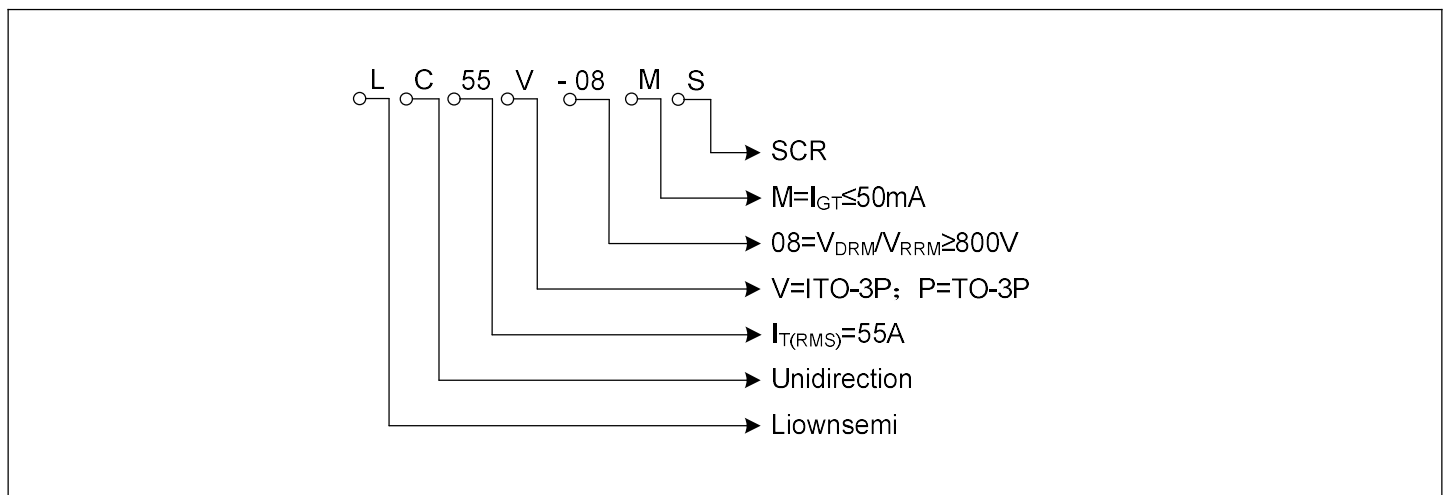
1. for both polarities of A2 referenced to A1

Static Characteristics

Test conditions	Symbol	Value
$I_{TM}=55\text{A}, t_p=380\mu\text{s}, T_J=25^\circ\text{C}$	$V_T \text{ Max.}^{(1)}$	1.6V
Threshold voltage, $T_J=125^\circ\text{C}$	$V_{t0 \text{ Max.}}^{(1)}$	0.85V
Dynamic resistance, $T_J=125^\circ\text{C}$	$R_D \text{ Max.}^{(1)}$	8m Ω
$V_{DRM}=V_{RRM}, T_J=25^\circ\text{C}$	$I_{DRM \text{ Max.}}$	5 μA
$V_{DRM}=V_{RRM}, T_J=125^\circ\text{C}$	$I_{RRM \text{ Max.}}$	8mA

1. for both polarities of A2 referenced to A1

Part Number Code



Ordering Information

Part Number	Marking	Package
LC55P-08MS	LC55P-08MS	TO-3P
LC55V-08MS	LC55V-08MS	ITO-3P

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
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	T2	0.52	0.68
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