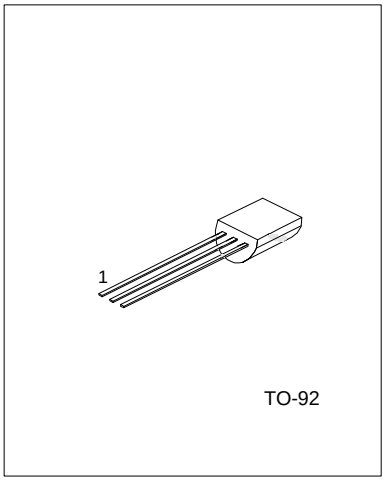
DESCRIPTION

The XL1225/ML1225 silicon controlled rectifiers are high performance planner diffused PNPN devices. These parts are intended for low cost high volume applications.



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1:CATHODE 2:GATE 3:ANODE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C ,unless otherwise specified)

PARAMETERS	PART NO.	SYMBOL	TEST CONDITION	MIN. RATING	MAX. RATING	UNITS
Repetitive Peak Off-State Voltage	XL1225 ML1225	V_{DRM} V_{DRM}	Tj=40 to 125°C (rgk=1kΩ)	400 300		V
On-State Current		IT(RMS)	Tc=40°C	0.8		A
Average On-State Current		IT(AV)	Half Cycle=180, Tc=40°C	0.5		A
Peak Reverse Gate Voltage		V_{GRM}	IGR=10uA	1		V
Peak Gate Current		IGM	10us Max.	0.1		A
Gate Dissipation		PG(AV)	20ms Max.	150		W
Operating Temperature		Tj		-40	125	°C
Storage Temperature		T_{STG}		-40	125	°C
Soldering Temperature		T_{SLD}	1.6mm from case 10s Max.		250	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C,unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Off state leakage current	I_{DRM}	@$V_{DRM(RGK=1K\Omega)}$, Tj=125°C		0.1	mA
Off state leakage current	I_{DRM}	@$V_{DRM(RGK=1K\Omega)}$, Tj=25°C		1.0	μA
On state voltage	VT	AT IT=0.4A AT IT=0.8A		1.4 2.2	V
On state threshold voltage	VT(TO)	Tj=125°C		0.95	V
On state slops resistance	Rt	Tj=125°C		600	m
Gate trigger current	IGT	VD=7V		200	μA
Gate trigger voltage	VGT	VD=7V		0.8	V
Holding current	IH	RGK=1KΩ		5	mA
Latching current	IL	RGK=1KΩ		6	mA
Critical rate of voltage rise	DV/DT	VD=0.67*VDRM(RGK=1KΩ), Tj=125°C			V/μs
Critical rate of current rise	DV/DT	IG=10mA, dIG/dt=0.1A/μs, Tj=125°C			A/μs
Gate controlled delay time	TGD	IG=10mA, dIG/dt=0.1A/μs,		500	μs
Commutated turn-off time	TG	Tj=85°C, VD=0.67*VDRM, VR=35V, IT=IT(AV)		200	μs

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNIT
Thermal resistance junc. to case	Rθ JC				K/W
Thermal resistance junc. to case	Rθ JA				K/W

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RANK	B	C	AA	AB	AC	AD
RANGE	50-100μA	100-200μA	8-15μA	15-20μA	20-25μA	25-50μA