

CS220-35M
CS220-35N

SILICON CONTROLLED RECTIFIER
35 AMP, 600 THRU 800 VOLTS



TO-220 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS220-35M series type is an Epoxy Molded Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

MARKING CODE: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	CS220 -35M	CS220 -35N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	600	800	V
RMS On-State Current ($T_C=90^\circ\text{C}$)	$I_T(\text{RMS})$		35	A
Peak One Cycle Surge ($t=10\text{ms}$)	I_{TSM}		350	A
I^2t Value for Fusing ($t=10\text{ms}$)	I^2t	600		A^2s
Peak Gate Power ($t_p=10\mu\text{s}$)	P_{GM}		40	W
Average Gate Power Dissipation	$P_G (AV)$		1.0	W
Peak Forward Gate Current ($t_p=10\mu\text{s}$)	I_{FGM}		4.0	A
Peak Forward Gate Voltage ($t_p=10\mu\text{s}$)	V_{FGM}		16	V
Peak Reverse Gate Voltage ($t_p=10\mu\text{s}$)	V_{RGM}		5.0	V
Critical Rate of Rise of On-State Current	di/dt		100	$\text{A}/\mu\text{s}$
Storage Temperature	T_{stg}	-40 to +150		$^\circ\text{C}$
Junction Temperature	T_J	-40 to +125		$^\circ\text{C}$
Thermal Resistance	θ_{JA}		60	$^\circ\text{C}/\text{W}$
Thermal Resistance	θ_{JC}		1.3	$^\circ\text{C}/\text{W}$

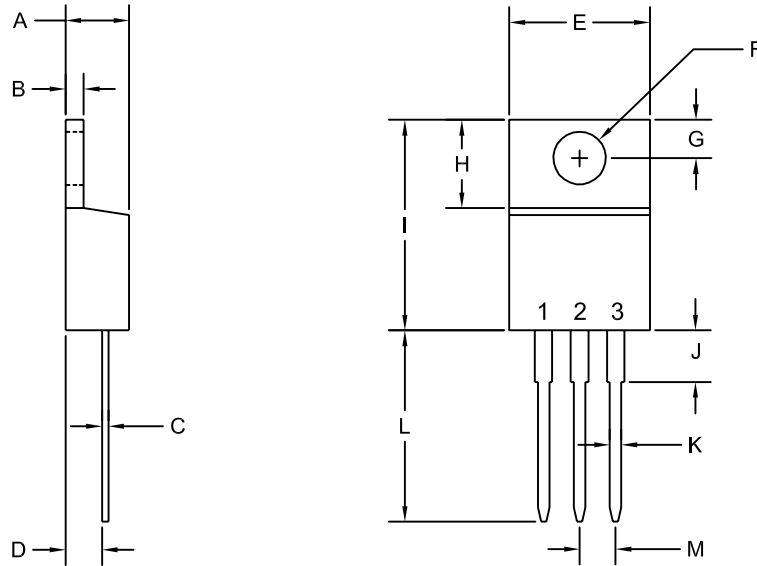
ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}			10	μA
I_{DRM}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$			4.0	mA
I_{GT}	$V_D=12\text{V}, R_L=10\Omega$		5.5	30	mA
I_H	$I_T=100\text{mA}$		15.8	40	mA
V_{GT}	$V_D=12\text{V}, R_L=10\Omega$		0.67	1.0	V
V_{TM}	$I_{TM}=70\text{A}, t_p=380\mu\text{s}$			2.2	V
dv/dt	$V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$		250		$\text{V}/\mu\text{s}$

R1 (24-September 2004)

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TO-220 CASE - MECHANICAL OUTLINE



R2

LEAD CODE:

- 1) CATHODE
- 2) ANODE
- 3) GATE

NOTE: TAB IS COMMON
TO PIN 2 (ANODE)

MARKING CODE:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.170	0.190	4.31	4.82
B	0.045	0.055	1.15	1.39
C	0.013	0.026	0.33	0.65
D	0.083	0.107	2.10	2.72
E	0.394	0.417	10.01	10.60
F (DIA)	0.140	0.157	3.55	4.00
G	0.100	0.118	2.54	3.00
H	0.230	0.270	5.85	6.85
I	0.560	0.625	14.23	15.87
J	-	0.250	-	6.35
K	0.025	0.038	0.64	0.96
L	0.500	0.579	12.70	14.70
M	0.090	0.110	2.29	2.79

TO-220 (REV: R2)

R1 (24-September 2004)