2N3738
2N3739

SILICON
NPN POWER TRANSISTOR

TO-66 CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3738 and 2N3739 are silicon epitaxial NPN power transistors designed for high voltage amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**2N3738**	**2N3739**	**UNITS**
Collector-Base Voltage	V_{CBO}	250	325	V
Collector-Emitter Voltage	V_{CEO}	225	300	V
Emitter-Base Voltage	V_{EBO}	6.0		V
Continuous Collector Current	I_C	1.0		A
Peak Collector Current	I_{CM}	2.0		A
Continuous Base Current	I_B	0.5		A
Peak Base Current	I_{BM}	1.0		A
Power Dissipation	P_D	20		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200		°C
Thermal Resistance	Θ_{JC}	7.5		°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=Rated V_{CBO}		0.1	mA
I_{CEV}	V_{CE}=250V, V_{BE}=1.5V (2N3738)		0.5	mA
I_{CEV}	V_{CE}=300V, V_{BE}=1.5V (2N3739)		0.5	mA
I_{CEV}	V_{CE}=125V, V_{BE}=1.5V, T_C=100°C (2N3738)		1.0	mA
I_{CEV}	V_{CE}=200V, V_{BE}=1.5V, T_C=100°C (2N3739)		1.0	mA
I_{CEO}	V_{CE}=125V (2N3738)		0.25	mA
I_{CEO}	V_{CE}=200V (2N3739)		0.25	mA
I_{EBO}	V_{EB}=6.0V		0.1	mA
BV_{CEO}	I_C=5.0mA, (2N3738)	225		V
BV_{CEO}	I_C=5.0mA, (2N3739)	300		V
$V_{CE(SAT)}$	I_C=250mA, I_B=25mA		2.5	V
$V_{BE(ON)}$	V_{CE}=10V, I_C=100mA		1.0	V
h_{FE}	V_{CE}=10V, I_C=50mA	30		
h_{FE}	V_{CE}=10V, I_C=100mA	40	200	
h_{FE}	V_{CE}=10V, I_C=250mA	25		
h_{fe}	V_{CE}=20V, I_C=100mA, f=1.0kHz	35		
f_T	V_{CE}=10V, I_C=100mA, f=10MHz	10		MHz
C_{ob}	V_{CB}=100V, I_E=0, f=100kHz		20	pF

R1 (2-September 2014)

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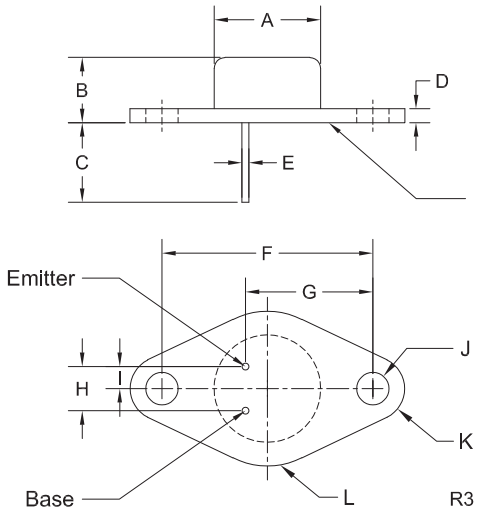
TO-66 CASE - MECHANICAL OUTLINE



Seating Plane:
The seating plane must be within 0.001" concave to 0.004" convex within 0.600" diameter from the center of the device.

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.470	0.500	11.94	12.70
B	0.250	0.340	6.35	8.64
C	0.360	-	9.14	-
D	0.050	0.075	1.27	1.91
E (DIA)	0.028	0.034	0.71	0.86
F	0.956	0.964	24.28	24.48
G	0.570	0.590	14.48	14.99
H	0.190	0.210	4.83	5.33
I	0.093	0.107	2.36	2.72
J (DIA)	0.142	0.152	3.61	3.86
K (RAD)	0.141		3.58	
L (RAD)	0.345		8.76	

TO-66 (REV:R3)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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