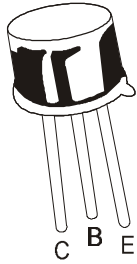


SILICON POWER SWITCHING TRANSISTORS

2N5320, 2N5321 NPN
2N5322, 2N5323 PNP



TO-39
Metal Can Package

Medium Power Amplifier and Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N5320	2N5321	2N5322	2N5323	UNITS
Collector Emitter Voltage	V_{CEO}	75	50	75	50	V
Collector Base Voltage	V_{CBO}	100	75	100	75	V
Emitter Base Voltage	V_{EBO}	7	5	7	5	V
Collector Current - Continuous	I_C	2.0				A
Base Current	I_B	1.0				A
Power Dissipation@ $T_a=25^\circ\text{C}$ Derate Above 25°C	P_D	1				W
		5.71				mW/ $^\circ\text{C}$
Power Dissipation@ $T_c=25^\circ\text{C}$ Derate Above 25°C	P_D	10				W
		57.14				mW/ $^\circ\text{C}$
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to +200				$^\circ\text{C}$

THERMAL CHARACTERISTICS

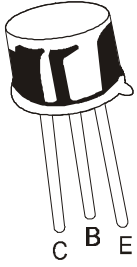
Junction to Ambient in free air	$R_{th(j-a)}$	175	$^\circ\text{C/W}$
Junction to Case	$R_{th(j-c)}$	17.5	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNITS
Collector Emitter Voltage	V_{CEO}	$I_C=100\text{mA}, I_B=0$ 2N5320/5322 2N5321/5323	75 50		V V
Collector Cut Off Current	I_{CEX}	$V_{CE}=70\text{V}, V_{BE}=1.5\text{V}, T_c=150^\circ\text{C}$ 2N5320/5322		5	mA
		$V_{CE}=45\text{V}, V_{BE}=1.5\text{V}, T_c=150^\circ\text{C}$ 2N5321/5323		5	mA
		$V_{CE}=100\text{V}, V_{BE}=1.5\text{V}$ 2N5320/5322		100	μA
		$V_{CE}=75\text{V}, V_{BE}=1.5\text{V}$ 2N5321/5323		100	μA
Emitter Cut Off Current	I_{EBO}	$V_{BE}=5\text{V}, I_C=0$ 2N5321/5323		100	μA
		$V_{BE}=7\text{V}, I_C=0$ 2N5320/5322		100	μA

SILICON POWER SWITCHING TRANSISTORS

**2N5320, 2N5321 NPN
2N5322, 2N5323 PNP**



**TO-39
Metal Can Package**

ELECTRICAL CHARACTERISTICS (T_a=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	*h _{FE}	I _C =1A, V _{CE} =2V 2N5320/5322	10			
		I _C =0.5A, V _{CE} =4V 2N5320/5322 2N5321/5323	30 40		130 250	
Collector Emitter Saturation Voltage	*V _{CE (sat)}	I _C =500mA, I _B =50mA 2N5320 2N5321 2N5322 2N5323			0.5 0.8 0.7 1.2	V V V V
Base Emitter On Voltage	*V _{BE (on)}	I _C =500mA, V _{CE} =4V 2N5320/5322 2N5321/5323			1.1 1.4	V V

DYNAMIC CHARACTERISTICS

Small Signal Current Gain	h _{fe}	I _C =50mA, V _{CE} =4V, f=10MHz	5			
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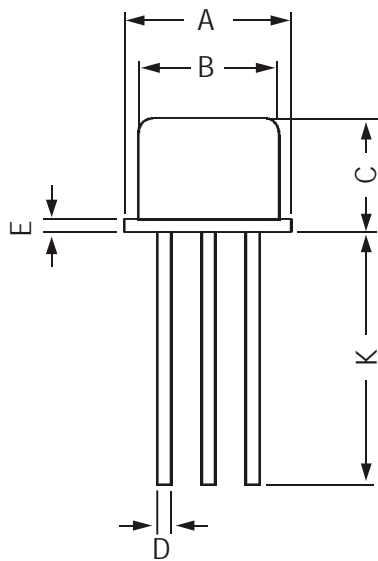
SWITCHING CHARACTERISTICS

Turn On time	t _{on}	V _{CC} =30V, I _C =500mA, I _{B1} =50mA 2N5320/5321 2N5322/5323			80 100	ns ns
Turn Off time	t _{off}	V _{CC} =30V, I _C =500mA, I _{B1} =I _{B2} =50mA 2N5320/5321 2N5322/5323			800 1000	ns ns

*Pulsed: Pulse width ≤300ms, duty cycle ≤2%

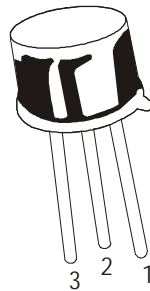
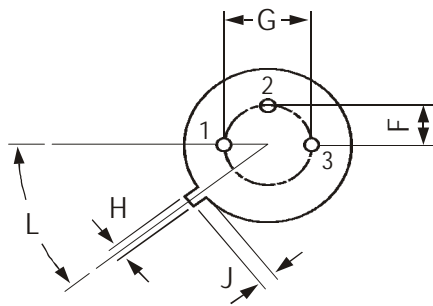
TO-39
Metal Can Package

TO-39 Metal Can Package



All dimensions are in mm

DIM	MIN	MAX
A	8.50	9.39
B	7.74	8.50
C	6.09	6.60
D	0.40	0.53
E	—	0.88
F	2.41	2.66
G	4.82	5.33
H	0.71	0.86
J	0.73	1.02
K	12.70	—
L	42 DEG	48 DEG



PIN CONFIGURATION
1. EMITTER
2. BASE
3. COLLECTOR

Packing Details

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-39	500 pcs/polybag	540 gm/500 pcs	3" x 7.5" x 7.5"	20K	17" x 15" x 13.5"	32K	40 kgs

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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