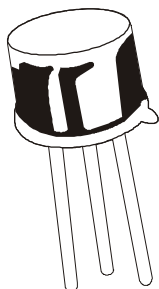


NPN SILICON PLANAR TRANSISTORS

2N3053
2N3053A
TO-39



General Purpose, Medium Current Amplifier Applications.

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N3053	2N3053A	UNITS
Collector -Emitter Voltage (1)	V _{CEO}	40	60	V
Collector -Base Voltage	V _{CBO}	60	80	V
Emitter -Base Voltage	V _{EBO}	5.0		V
Collector Current Continuous	I _C	700		mA
Power Dissipation @ T _c =25 degC	P _D	5.0		W
Derate Above 25 deg C		28.6		mW/deg C
Operating And Storage Junction Temperature Range	T _j , T _{stg}	-65 to +200		deg C
Lead Temperature 1/16", +/- 1/32"	TL	+235		deg C
From Case for 10 s				
THERMAL RESISTANCE				
Junction to Case	R _{th(j-c)}	35		deg C/W

(1) Applicable 0 to 100mA(pulsed):

Pulse Width =300us, Duty Cycle=2%

0 to 700 mA; Pulse Width=10us, Duty Cycle=2%

ELECTRICAL CHARACTERISTICS (T_a=25 deg C Unless Otherwise Specified)

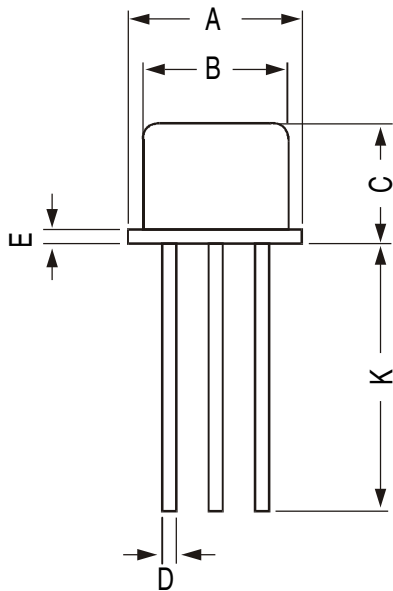
DESCRIPTION	SYMBOL	TEST CONDITION	2N3053	2N3053A	UNITS
Collector -Emitter Voltage	V _{CEO} *	I _C =100uA, I _B =0	>40	>60	V
	V _{CER} *	I _C =100mA, R _{BE} =10ohms	>50	>70	V
Collector -Base Voltage	V _{CBO}	I _C =100uA, I _E =0	>60	>80	V
Emitter -Base Voltage	V _{EBO}	I _E =100uA, I _C =0	>5.0	>5.0	V
Collector-Cut off Current	I _{CEX}	V _{CE} =30V, V _{BE} (off)=1.5V	<250	-	nA
		V _{CE} =60V, V _{BE} (off)=1.5V	-	<250	nA
Emitter-Cut off Current	I _{EBO}	V _{BE} =4V, I _C =0	<250	-	nA
Base Cutt-off Current	I _{BL}	V _{CE} =60V, V _{BE} (off)=1.5V	-	<250	nA
DC Current Gain	h _{FE} *	I _C =150mA, V _{CE} =2.5V	>25	>25	
		I _C =150mA, V _{CE} =10V	50 -250	50 -250	
Collector Emitter Saturation Voltage	V _{CE} (Sat)*	I _C =150mA, I _B =15mA	<1.4	<0.3	V
Base Emitter Saturation Voltage	V _{BE} (Sat) *	I _C =150mA, I _B =15mA	<1.7	0.6-1.0	V
Base Emitter on Voltage	V _{BE} (on)*	I _C =150mA, V _{CE} =2.5V	<1.7	<1.0	V

SMALL SIGNAL CHARACTERISTICS

Output Capacitance	C _{obo}	V _{CB} =10V, I _E =0, f=140kHz	<15	<15	pF
Input Capacitance	C _{ibo}	V _{BE} =0.5V, I _C =0, f=140kHz	<80	<80	pF
Current Gain-Bandwidth Product	f _t	I _C =50mA, V _{CE} =10V, f=20MHz	>100	>100	MHz

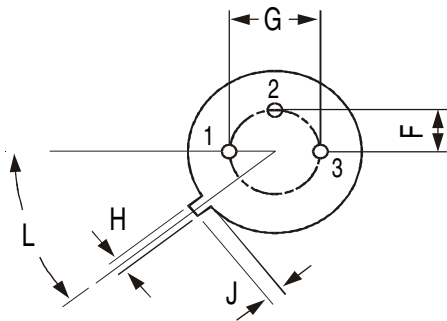
*Pulse Test:- Pulse Width =300us, Duty Cycle=2%

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 Detail

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"	20.0K	17" x 15" x 13.5"	32.0K	40 kgs

Disclaimer

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