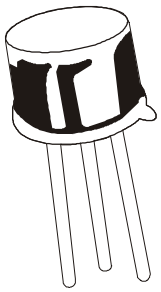
Continental Device India Limited

An ISO/TS16949 and ISO 9001 Certified Company

PNP SILICON PLANAR SWITCHING TRANSISTORS

2N2904A
2N2905A
TO-39



Switching And Linear Application DC to VHF Amplifier Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	2N2904A, 05A	UNIT
Collector -Emitter Voltage	VCEO	60	V
Collector -Base Voltage	VCBO	60	V
Emitter -Base Voltage	VEBO	5.0	V
Collector Current Continuous	IC	600	mA
Power Dissipation @Ta=25 degC	PD	600	mW
Derate Above 25deg C		3.43	mW/deg C
@ Tc=25 degC	PD	3.0	W
Derate Above 25deg C		17.2	mW/deg C
Operating And Storage Junction Temperature Range	Tj, Tstg	-65 to +200	deg C

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

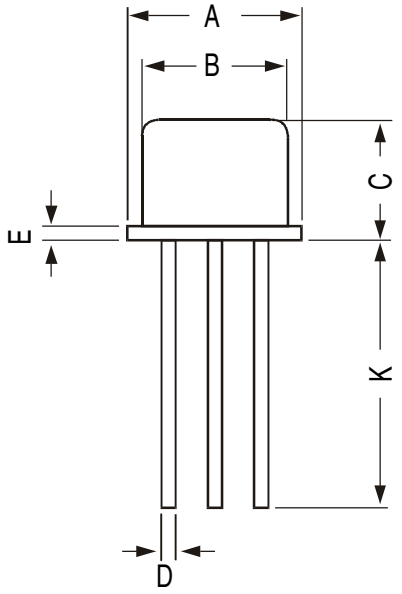
DESCRIPTION	SYMBOL	TEST CONDITION	VALUE		UNIT
			MIN	MAX	
Collector -Emitter Voltage	VCEO*	IC=10mA,IB=0	60	-	V
Collector -Base Voltage	VCBO	IC=10uA.IE=0	60	-	V
Emitter-Base Voltage	VEBO	IE=10uA, IC=0	5.0	-	V
Collector-Cut off Current	ICBO	VCB=50V, IE=0	-	10	nA
		Ta=150 deg C			
		VCB=50V, IE=0	-	10	uA
	ICEX	VCE=30V, VBE=0.5V	-	50	nA
Base Current	IB	VCE=30V, VBE=0.5V	-	50	nA
Collector Emitter Saturation Voltage	VCE(Sat)*	IC=150mA,IB=15mA	-	0.4	V
		IC=500mA,IB=50mA		1.6	V
Base Emitter Saturation Voltage	VBE(Sat) *	IC=150mA,IB=15mA	-	1.3	V
		IC=500mA,IB=50mA	-	2.6	V
			2N2904A	2N2905A	
DC Current Gain	hFE	IC=0.1mA,VCE=10V	>40	>75	
		IC=1mA,VCE=10V	>40	>100	
		IC=10mA,VCE=10V	>40	>100	
		IC=150mA,VCE=10V*	40-120	100-300	
		IC=500mA,VCE=10V*	>40	>50	

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)				2N2904A-05A	
DESCRIPTION	**SYMBOL**	**TEST CONDITION**	**MIN**	**MAX**	**UNIT**
DYNAMIC CHARACTERISTICS					
Transition Frequency	ft **	IC=50mA, VCE=20V,f=100MHz	200	-	MHz
Out-Put Capacitance	Cob	VCB=10V, IE=0,f=100kHz	-	8.0	pF
Input Capacitance	Cib	VBE=2V, IC=0, f=100kHz	-	30	pF
Switching Time					
Delay time	td	IC=150mA,IB1=15mA	-	10	ns
Rise time	tr	VCC=30V	-	40	ns
Turn-On Time	ton			45	ns
Storage time	ts	IC=150mA, IB1=IB2=15mA	-	80	ns
Fall time	tf	VCC=6V	-	30	ns
Turn-Off Time	toff		-	100	ns

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

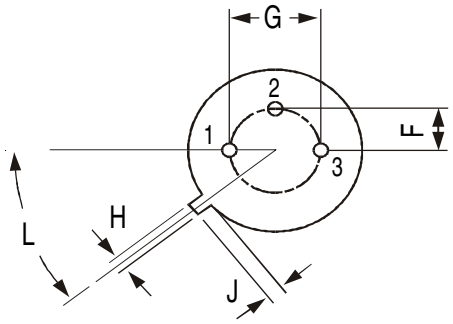
****ft is defined as the frequency at which \hfe/ extrapolates to unity**

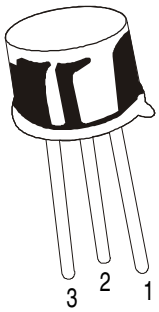
TO-39 Metal Can Package



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

All dimensions are in mm





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

Notes

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 on the CDIL Web Site/CD is 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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