



Continental Device India Limited

An ISO/TS16949 and ISO 9001 Certified Company

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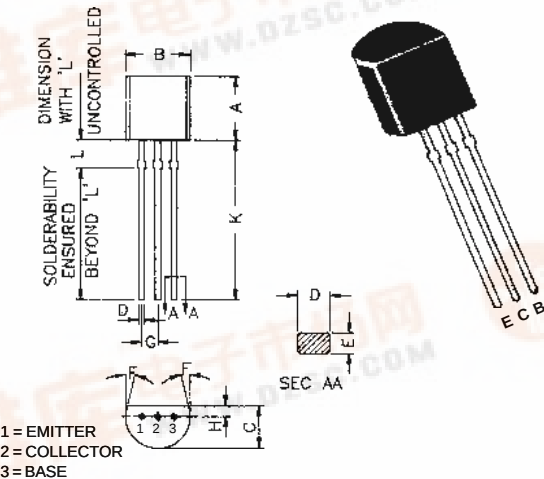
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TO-92 Plastic Package

CSA970
CSC2240

CSA 970 PNP SILICON PLANAR EPITAXIAL TRANSISTORS
CSC 2240 NPN SILICON PLANAR EPITAXIAL TRANSISTORS
Low Noise Audio Amplifier



DIM	MIN	MAX
A	4,32	5,33
B	4,45	5,20
C	3,18	4,19
D	0,41	0,55
E	0,35	0,50
F	5 DEG	
G	1,14	1,40
H	1,14	1,53
K	12,70	—
L	1.982	2.082

ALL DIMENSIONS IN M.M.

ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	120	V
Collector Emitter Voltage	V_{CEO}	120	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Continuous	I_C	100	mA
Emitter Current	I_E	100	mA
Power Dissipation	P_D	300	mW
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-55 to +150	°C



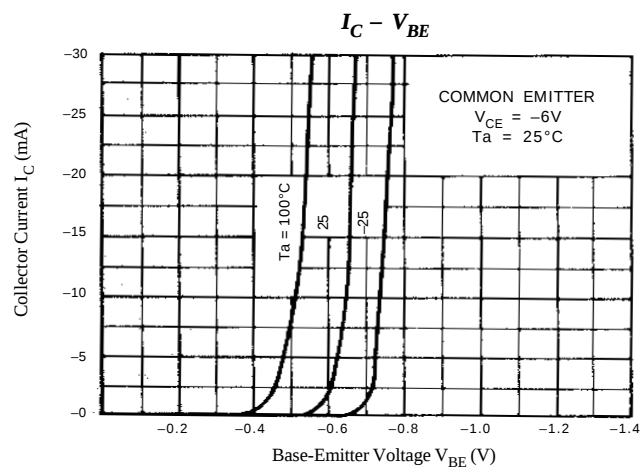
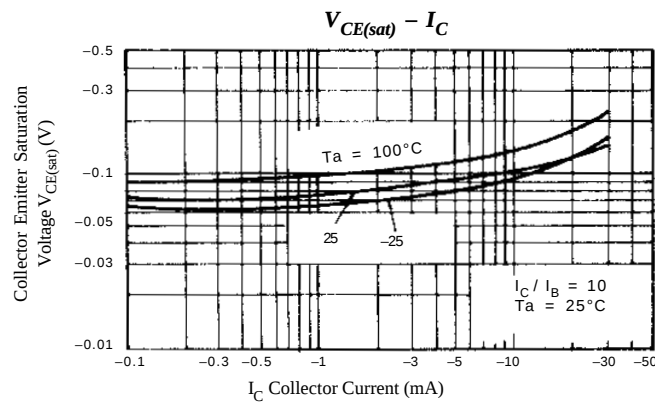
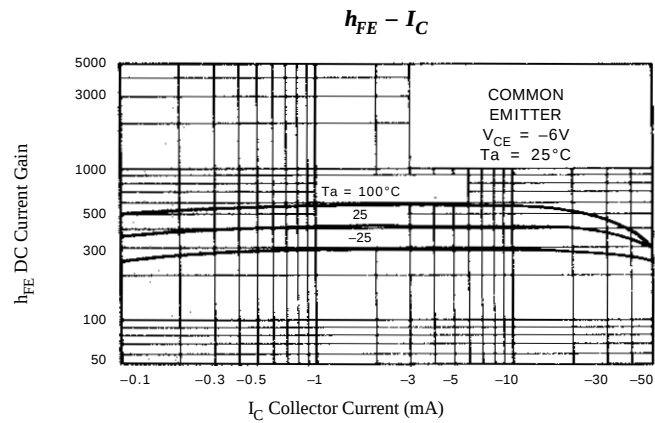
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ELECTRICAL CHARACTERISTICS ($T_a = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Characteristic Unit	Symbol	Min	Typ	Max	
Collector Cutoff Current $V_{CB}=120\text{V}, I_E=0$	I_{CBO}	-	-	100	nA
Emitter Cutoff Current $V_{EB}=5\text{V}, I_C=0$	I_{EBO}	-	-	100	nA
Collector Emitter Voltage $I_C=1\text{mA}, I_B=0$	V_{CEO}	120	-	-	V
D.C. Current Gain $V_{CE}=6\text{V}, I_C=2\text{mA}$	h_{FE}	200	-	700	
Collector Emitter Saturation Voltage $I_C=10\text{mA}, I_B=1\text{mA}$	$V_{CE(sat)}$	-	-	0.3	V
Base Emitter On Voltage $V_{CE}=6\text{V}, I_C=2\text{mA}$	$V_{BE (on)}$	-	0.65	-	V
DYNAMIC CHARACTERISTICS					
Transition Frequency $V_{CE}=6\text{V}, I_C=1\text{mA}$	f_T	-	100	-	MHz
Collector Output Capacitance $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	C_{ob}	-	4.0	-	pF
		-	3.0	-	pF
Noise Figure $V_{CE}=5\text{V}, I_C=250\mu\text{A}$ $R_g=1\text{k}\Omega, f=10\text{Hz to } 15.7\text{ kHz}$	NF	-	-	10	dB
$V_{CE}=6\text{V}, I_C=100\mu\text{A}, f=1\text{KHz}$ $R_g=100\Omega$		-	3	-	dB
h_{FE} Classification		GR 200-400	BL 350-700		

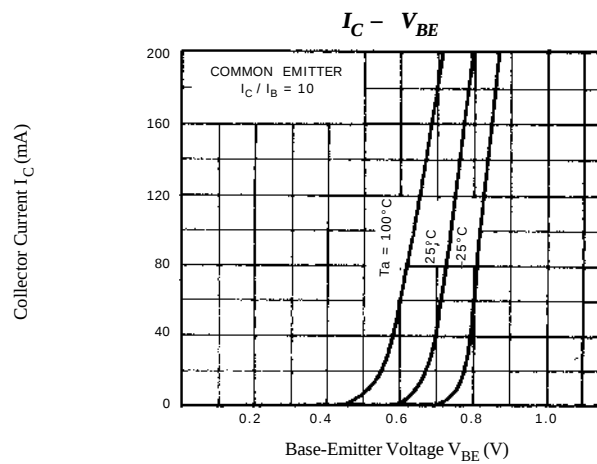
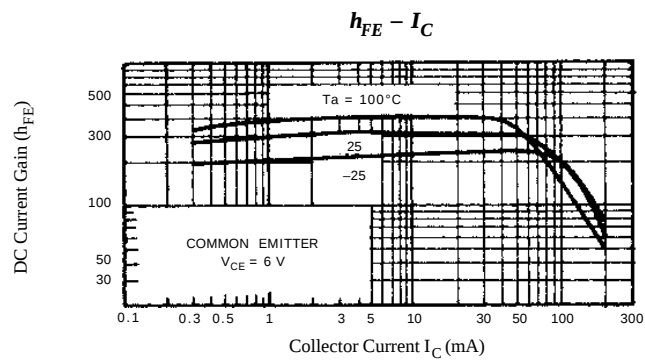
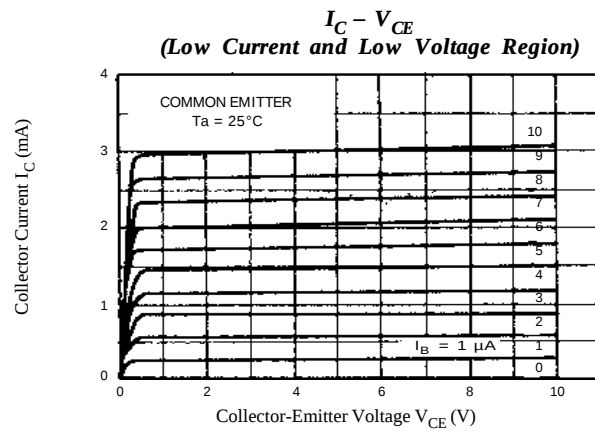
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Notes

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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