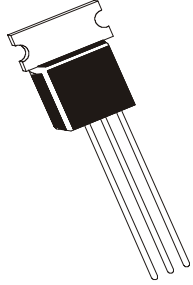


**PNP/NPN COMPLEMENTARY PLANAR SILICON TRANSISTORS**

**CSA1013 (PNP)  
CSC2383 (NPN)  
TO-237  
BCE**



**Vertical Deflection Output & Class B Sound Output Applications of Colour T.V**

**ABSOLUTE MAXIMUM RATINGS(Ta=25deg C unless otherwise specified )**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	VCBO	160	V
Collector -Emitter Voltage	VCEO	160	V
Emitter Base Voltage	VEBO	6.0	V
Collector Current	IC	1.0	A
Base Current	IB	500	mA
Collector Power Dissipation	PC	900	mW
Operating And Storage Junction Temperature Range	Tj, Tstg	-55 to +150	deg C

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

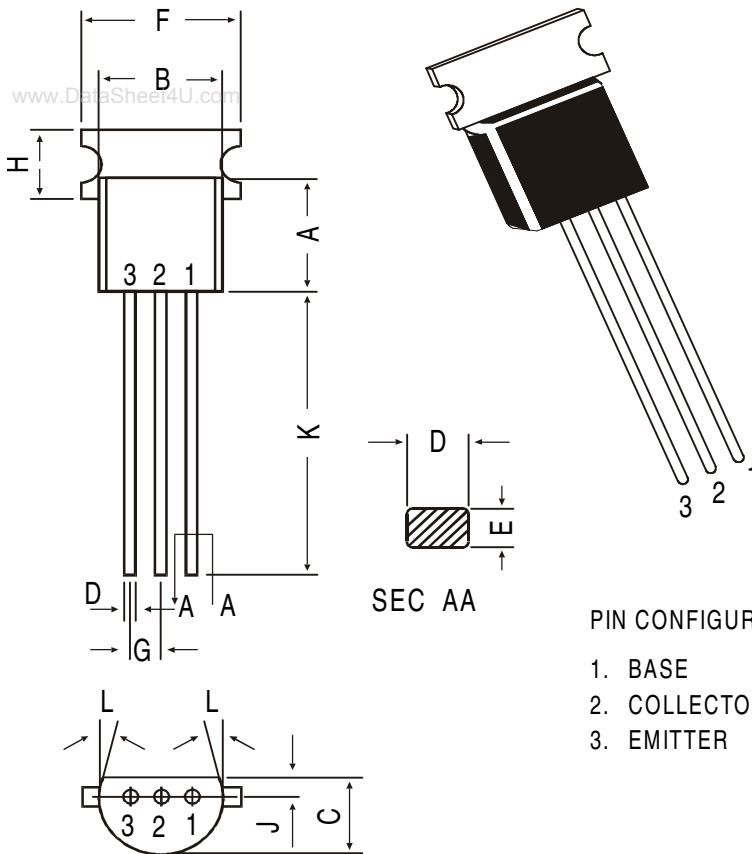
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector -Emitter Voltage	VCEO	IC=10mA, IB=0	160	-	-	V
Collector Cut off Current	ICBO	VCB=150V, IE=0	-	-	1.0	uA
Emitter Cut off Current	IEBO	VEB=6V, IC=0	-	-	1.0	uA
DC Current Gain	hFE*	IC=200mA, VCE=5V	60	-	320	
Collector Emitter Saturation Voltage	VCE(Sat) *	IC=500mA, IB=50mA	-	-	1.5	V
Base Emitter on Voltage	VBE(on)*	IC=5mA, VCE=5V	0.45	-	0.75	V
<b>Dynamic Characteristics</b>						
Output Capacitance	Cob	NPN VCB=10V, IE=0, f=1MHz	-	-	20	pF
Gain Bandwidth Product	ft	PNP VCE=5V, IC=200mA,	-	-	35	pF
		NPN	20	100	-	MHz
		PNP	15	50	-	MHz

**CLASSIFICATION**

	R	O	Y
hFE *	60-120	100-200	160-320

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

## TO-237 Plastic Package



All dimensions in mm.

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	—	5.40
G	1.14	1.40
H	—	2.54
K	12.70	—
L	5 DEG	
J	1.14	1.53

### PIN CONFIGURATION

1. BASE
2. COLLECTOR
3. EMITTER

## Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-237 Bulk	1K/polybag	240 gm/1K pcs	3" x 7.5" x 7.5"	5.0K	17" x 15" x 13.5"	80.0K	26.2 kgs
TO-237 T&A	2K/ammo box	725 gm/2K pcs	12.5" x 8" x 1.8"	2.0K	17" x 15" x 13.5"	32.0K	13.8 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 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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