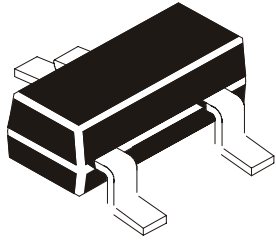


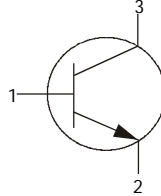
NPN SILICON PLANAR TRANSISTOR

**CMBT 9013
SOT-23**



PIN CONFIGURATION (NPN)

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



MARKING: AS BELOW

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	VCBO	35	V
Collector -Emitter Voltage	VCEO	30	V
Emitter Base Voltage	VEBO	5.0	V
Collector Current Continuous	IC	500	mA
Collector Dissipation	PC	250	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 -Base Voltage	VCBO	IC=100uA, IE=0	35	-	-	V
Collector -Emitter Voltage	VCEO	IC=1mA, IB=0	30	-	-	V
Emitter Base Voltage	VEBO	IE=100uA, IC=0	5.0	-	-	V
Collector Cut off Current	ICBO	VCB=25V, IE=0	-	-	100	nA
Emitter Cut off Current	IEBO	VEB=3V, IC=0	-	-	500	nA
DC Current Gain	hFE	IC=50mA, VCE=1V *	118	-	305	
		IC=300mA, VCE=1V	40	-	-	
Collector Emitter Saturation Voltage	VCE(Sat)	IC=150mA, IB=15mA	-	-	0.20	V
		IC=300mA, IB=30mA	-	-	0.60	V
Base Emitter Saturation Voltage	VBE(Sat)	IC=150mA, IB=15mA	-	-	1.0	V
		IC=300mA, IB=30mA	-	-	1.20	V
Dynamic Characteristics						
Transition Frequency	ft	VCE=10V, IC=50mA, f=100MHz	140	-	-	MHz

CLASSIFICATION

hFE*

MARKING

G/H/I

118-305

3GI

Customer 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 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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