

NPN SILICON PLANAR TRANSISTOR

FEATURES

- * Power dissipation
Pc : 0.25 W (Tamb=25°C)
- * Collector current
Ic : 0.1 A
- * Collector-base voltage
VCBO : 30 V
- * Operating and storage junction temperature range
Tj, Tstg: -55°C to +150°C

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.008 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

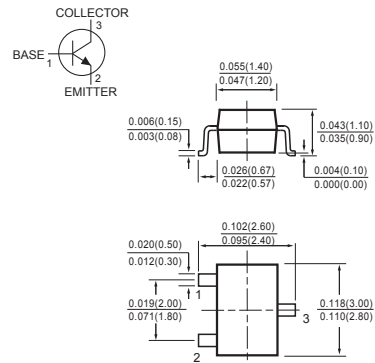
Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



SOT-23



Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector-base Voltage	VCBO	30	V
Collector-emitter Voltage	VCEO	30	V
Emitter-base Voltage	VEBO	5.0	V
Collector Current	IC	100	mA
Collector Dissipation	PC	250	mW
Operation And Storage Junction	TJ, TSTG	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (@ TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS
Collector-base Voltage (IC= 100µA, IE=0)	VCBO	30	-	-	V
Collector-emitter Voltage (IC= 1mA, IB=0)	VCEO	30	-	-	V
Emitter-base Voltage (IE= 100µA, IC=0)	VEBO	5.0	-	-	V
Collector Cut-off Current (VCB= 30V, IE=0)	ICBO	-	-	15	nA
Emitter Cut-off Current (VEB= 5V, IC= 0)	IEBO	-	-	500	nA
DC Current Gain (IC= 1mA, VCE= 5V)	hFE	150	-	1000	-
Collector-emitter Saturation Voltage (IC= 100mA, IB= 5mA)	VCE(sat)	-	-	0.60	V
Base-emitter Voltage (IC= 100mA, IB= 5mA)	VBE(sat)	-	-	1.2	V
Transition Frequency (VCE= 5V, IC= -10mA, f=100MHz)	fr	125	-	-	MHz
Output Capacitance (VCB= 10V, f= 1MHz)	Cob	-	-	3.5	pF
Noise Figure (VCE= 5V, IC= 200uA, f=1KHz)	NF	-	-	4.0	dB

CLASSIFICATION	CMBT9014	B	C	D
hFE	150-1000	100-300	200-600	400-1000
Marking	14	14B	14C	14D

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