RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

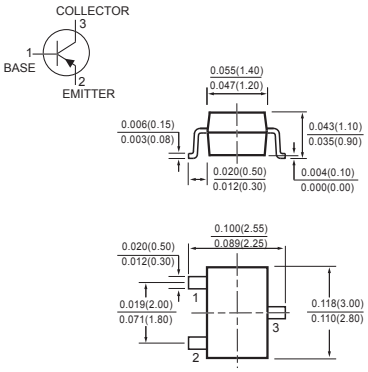
MMBTA56

SOT-23 BIPOLAR TRANSISTORS
TRANSISTOR(PNP)

FEATURES
* Power dissipation
  P_{CM} : 0.225 W(Tamb=25°C)
* Collector current
  I_{CM} : -0.5 A
* Collector-base voltage
  V_{CBO} : -80 V
* Operating and storage junction temperature range
  T_J,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

SOT-23



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

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

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS
Collector - Base Breakdown Voltage (I_C=-100 uA, I_E =0)	$V_{(BR)CBO}$	-80	-	-	V
Collector - Emitter Breakdown Voltage(I_C= -1mA, I_B=0)	$V_{(BR)CEO}$	-80	-	-	V
Emitter - Base Breakdown Voltage (I_E= -100 uA, I_C = 0)	$V_{(BR)EBO}$	-4	-	-	V
Collector Cut - Off Current (V_{CB}= -80V, I_E=0)	I_{CBO}	-	-	-0.1	μA
Collector Cut - Off Current (V_{CE}= -60V, I_B=0)	I_{CEO}	-	-	-0.1	μA
DC Current Gain(V_{CE}= -1V, I_C= -100mA)	h_{FE}	100	-	-	-
Collector - Emitter Saturation Voltage(I_C= -100 mA, I_B= -10mA)	$V_{CE(sat)}$	-	-	-0.25	V
Base - Emitter on Voltage(V_{CE}=-1V,I_C=-100mA)	$V_{BE(on)}$	-	-	-1.2	V
Transition Frequency(V_{CE}= -1V, I_C= -100mA, f =100MHz)	f_T	50	-	-	MHz

Marking	2GM

Note: “Fully ROHS compliant”, “100% Sn plating (Pb-free)”.

RATING AND CHARACTERISTICS CURVES (MMBTA56)

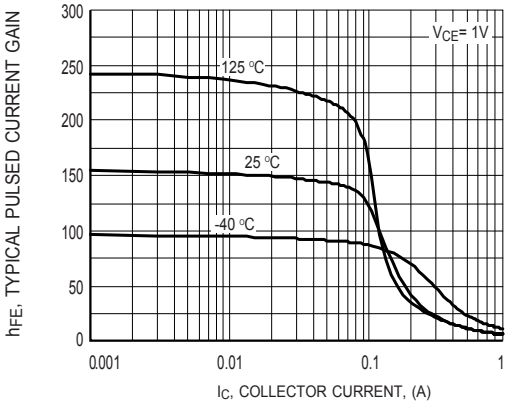


FIG.1 TYPICAL PULSE CURRENT GAIN vs. COLLECTOR CURRENT

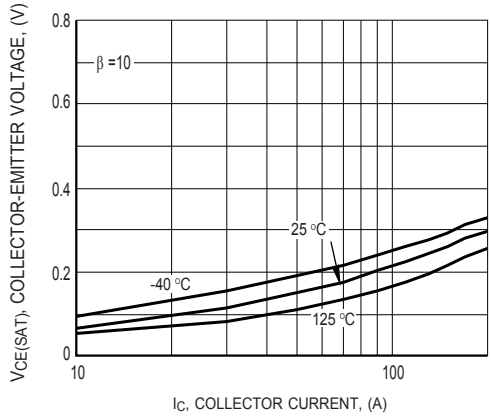


FIG.2 COLLECTOR-EMITTER SATURATION VOLTAGE vs. COLLECTOR CURRENT

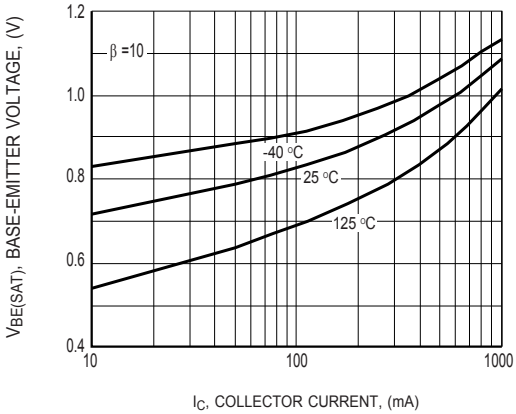


FIG.3 BASE-EMITTER SATURATION VOLTAGE vs. COLLECTOR CURRENT

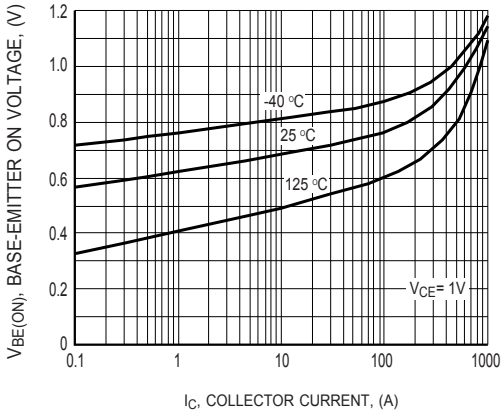


FIG.4 BASE-EMITTER ON VOLTAGE vs. COLLECTOR CURRENT

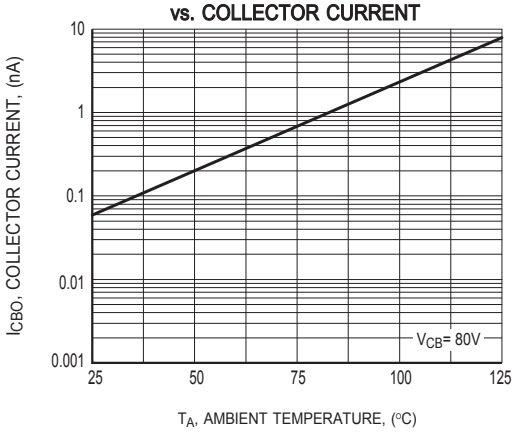


FIG.5 COLLECTOR-CUTOFF CURRENT vs. AMBIENT TEMPERATURE

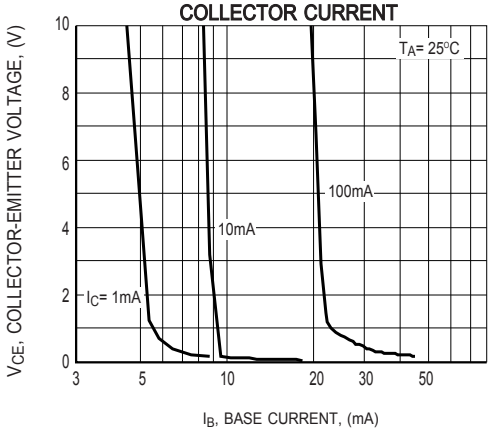


FIG.6 COLLECTOR SATURATION REGION

RATING AND CHARACTERISTICS CURVES (MMBTA56)

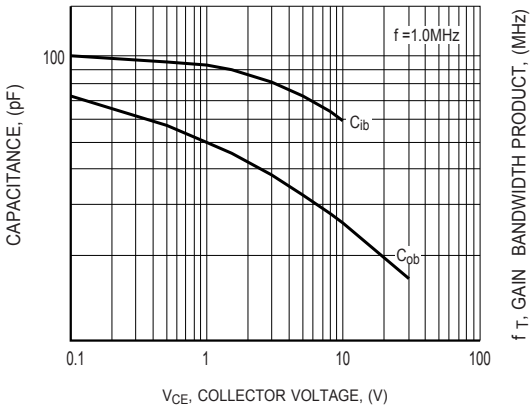


FIG.7 INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE

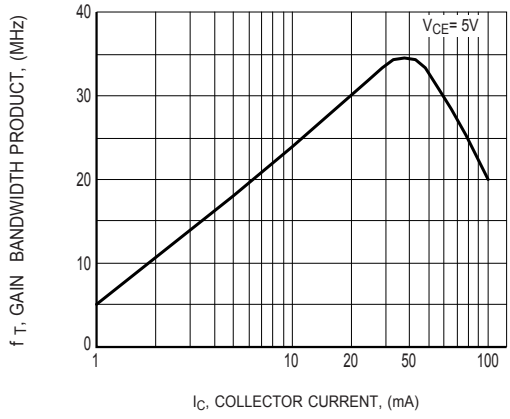


FIG.8 GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT

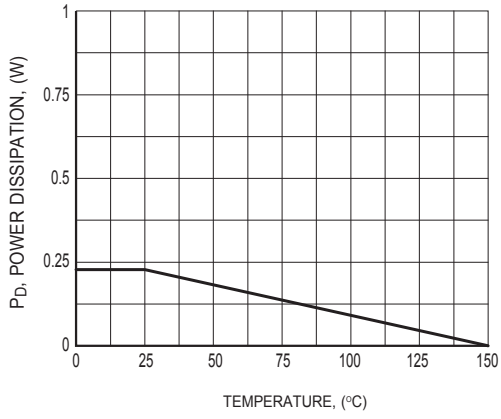


FIG.9 POWER DISSIPATION vs. AMBIENT TEMPERATURE

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