DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

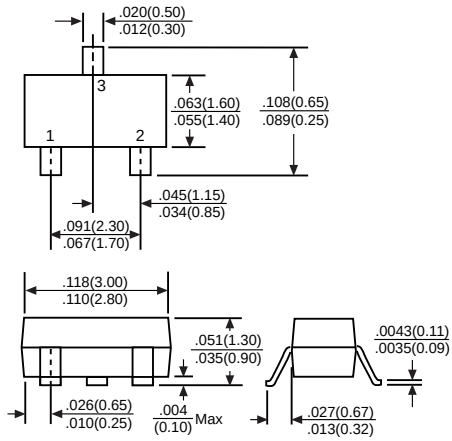
DMBT9018

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

Designed for use in AM/FM amplifier and local oscillator of FM/VHF tuner.

SOT-23



Dimensions in inches and (millimeters)

Pinning

1 = Base
2 = Emitter
3 = Collector

Absolute Maximum Ratings (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	50	mA
Total Power Dissipation	P_D	225	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Volatge	BV_{CBO}	20	-	-	V	I_C=100μA
Collector-Emitter Breakdown Voltage	BV_{CEO}	15	-	-	V	I_C=1mA
Emitter-Base Breakdown Volatge	BV_{EBO}	4	-	-	V	I_E=100μA
Collector Cutoff Current	I_{CBO}	-	-	0.1	μA	V_{CB}=12V
Emitter Cutoff Current	I_{EBO}	-	-	0.1	μA	V_{EB}=3V
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)}$	-	-	0.5	V	I_C=5mA, I_B=0.5mA
DC Current Gain(1)	h_{FE}	28	-	400	-	I_C=1mA, V_{CE}=5V
Transition Frequency	f_T	600	-	-	MHz	I_C=5mA, V_{CE}=5V

(1)Pulse Test: Pulse Width ≦380μs, Duty Cycle ≦2%

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