



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DMBT9018

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

**Description**

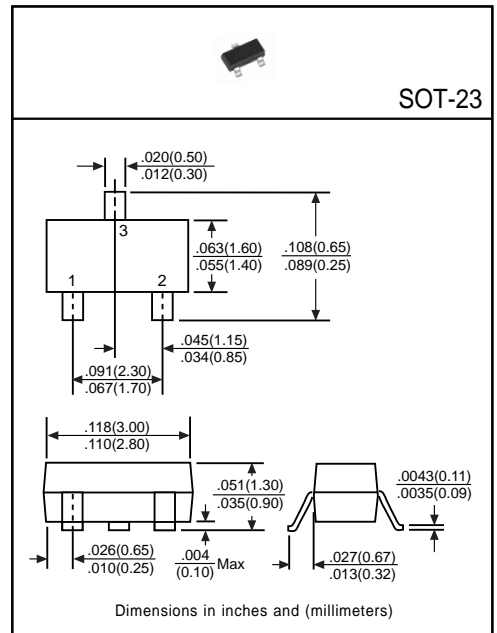
Designed for use in AM/FM amplifier and local oscillator of FM/VHF tuner.

**Pinning**

- 1 = Base
- 2 = Emitter
- 3 = Collector

**Absolute Maximum Ratings**( $T_A=25^{\circ}\text{C}$ )

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	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$



**Electrical Characteristics**

(Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified)

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

(1)Pulse Test: Pulse Width  $\leq 380\mu\text{s}$ , Duty Cycle  $\leq 2\%$