



DC COMPONENTS CO., LTD.
DISCRETE SEMICONDUCTORS

DMBT1815

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

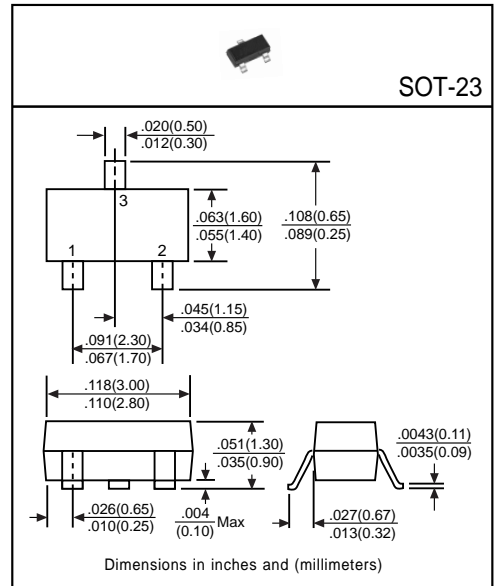
Designed for use in driver stage of AF amplifier and general purpose amplification.

Pinning

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

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	60	V
Collector-Emitter Voltage	V_{CE0}	50	V
Emitter-Base Voltage	V_{EB0}	5	V
Collector Current	I_C	150	mA
Total Power Dissipation	P_D	225	mW
Junction Temperature	T_J	+150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}C$



Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{CB0}	60	-	-	V	$I_C=100\mu A$
Collector-Emitter Breakdown Voltage	BV_{CE0}	50	-	-	V	$I_C=1mA$
Emitter-Base Breakdown Voltage	BV_{EB0}	5	-	-	V	$I_E=10\mu A$
Collector Cutoff Current	I_{CBO}	-	-	100	nA	$V_{CB}=60V$
Emitter Cutoff Current	I_{EBO}	-	-	100	nA	$V_{EB}=5V$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)}$	-	-	0.25	V	$I_C=100mA, I_B=10mA$
Base-Emitter Saturation Voltage ⁽¹⁾	$V_{BE(sat)}$	-	-	1	V	$I_C=100mA, I_B=10mA$
DC Current Gain ⁽¹⁾	hFE1	120	-	700	-	$I_C=2mA, V_{CE}=6V$
	hFE2	25	-	-	-	$I_C=150mA, V_{CE}=6V$
Transition Frequency	f_T	80	-	-	MHz	$I_C=1mA, V_{CE}=10V, f=100MHz$
Output Capacitance	C_{ob}	-	-	3.5	pF	$V_{CB}=10V, f=1MHz$

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

Classification of hFE1

Rank	Y	G	B
Range	120~240	200~400	350~700