DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

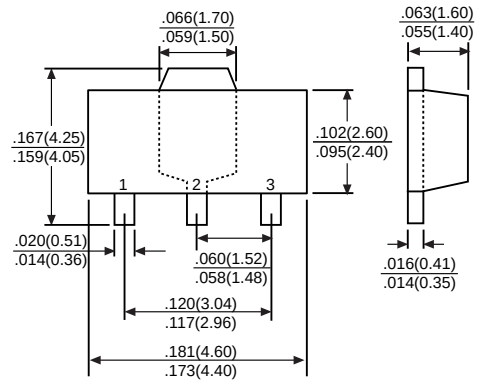
DXTD965

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

Designed for use in AF output amplifier and flash unit.

SOT-89



Dimensions in inches and (millimeters)

Pinning

1 = Base
2 = Collector
3 = Emitter

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current (continuous)	I_C	5	A
Collector Current (peak PT=10mS)	I_C	8	A
Total Power Dissipation	P_D	1.2	W
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}	40	-	-	V	I_C=100μA
Collector-Emitter Breakdown Voltage	BV_{CEO}	20	-	-	V	I_C=1mA
Emitter-Base Breakdown Volatge	BV_{EBO}	7	-	-	V	I_E=10μA
Collector Cutoff Current	I_{CBO}	-	-	0.1	μA	V_{CB}=10V
Emitter Cutoff Current	I_{EBO}	-	-	0.1	μA	V_{EB}=7V
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)}$	-	0.35	1	V	I_C=3A, I_B=0.1A
DC Current Gain(1)	h_{FE1}	340	-	800	-	I_C=0.5A, V_{CE}=2V
	h_{FE2}	150	-	-	-	I_C=2A, V_{CE}=2V
Transition Frequency	f_T	-	150	-	MHz	I_E=50mA, V_{CE}=6V
Output Capacitance	C_{ob}	-	-	50	pF	V_{CB}=20V, f=1MHz

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

Classification of h_{FE1}

Rank	R	S
Range	340~600	560~800