DC COMPONENTS CO., LTD.

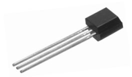
DISCRETE SEMICONDUCTORS

2SD965

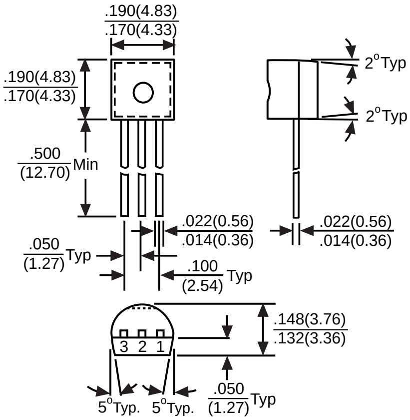
TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

Designed for use as AF output amplifier and flash unit.



TO-92



Dimensions in inches and (millimeters)

Pinning

1 = Emitter
2 = Collector
3 = Base

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	I_C	5	A
Total Power Dissipation	P_D	750	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}	40	-	-	V	I_C=100µA, I_E=0
Collector-Emitter Breakdown Voltage	BV_{CEO}	20	-	-	V	I_C=1mA, I_B=0
Emitter-Base Breakdown Volatge	BV_{EBO}	7	-	-	V	I_E=10µA, I_C=0
Collector Cutoff Current	I_{CBO}	-	-	0.1	µA	V_{CB}=10V, I_E=0
Emitter Cutoff Current	I_{EBO}	-	-	0.1	µA	V_{EB}=7V, I_C=0
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)}$	-	0.35	1	V	I_C=3A, I_B=100mA
DC Current Gain(1)	h_{FE1}	230	-	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, I_E=0

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

Classification of h_{FE1}

Rank	Q	R	S
Range	230~380	340~600	560~800

Diode, Bridge INDEX ① Rectifiers
Diode, Bridge INDEX ② Rectifiers
Transistors, INDEX ① SCR, IC
Transistors, INDEX ② SCR, IC
EXIT