DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

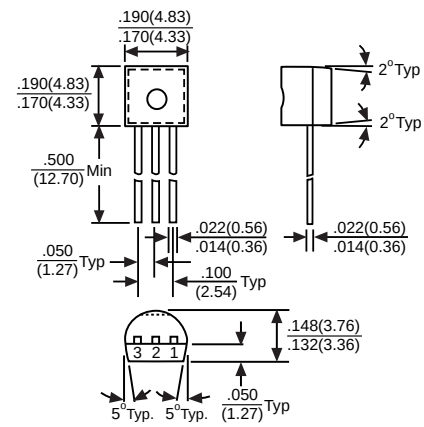
M28S

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

Designed for use in general purpose "Speech Synthesizer" (Voice ROM) IC audio output driver stage amplifier applications.

TO-92



Dimensions in inches and (millimeters)

Pinning

3 = Emitter
1 = Collector
2 = 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}	6	V
Collector Current	I_C	1.25	A
Base Current	I_B	0.4	A
Total Power Dissipation	P_D	850	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}	6	-	-	V	I_E=100μA, I_C=0
Collector Cutoff Current	I_{CBO}	-	-	0.1	μA	V_{CB}=35V, I_E=0
EmitterCutoff Current	I_{EBO}	-	-	0.1	μA	V_{EB}=6V, I_C=0
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)}$	-	-	0.55	V	I_C=600mA, I_B=20mA
DC Current Gain(1)	h_{FE1}	290	-	-	-	I_C=1mA, V_{CE}=1V
	h_{FE2}	300	-	1000	-	I_C=0.1A, V_{CE}=1V
	h_{FE3}	300	-	-	-	I_C=0.3A, V_{CE}=1V
	h_{FE4}	300	-	-	-	I_C=0.5A, V_{CE}=1V
Transition Frequency	f_T	100	-	-	MHz	I_C=50mA, V_{CE}=10V, f=1MHz
Output Capacitance	C_{ob}	-	9	-	pF	V_{CB}=10V, f=1MHz, I_E=0

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

Classification of h_{FE2}

Rank	B	C	D
Range	300~550	500~700	650~1000

Diode, Bridge Rectifiers INDEX① Diode, Bridge Rectifiers INDEX② Transistors, SCR, IC INDEX① Transistors, SCR, IC INDEX② EXIT