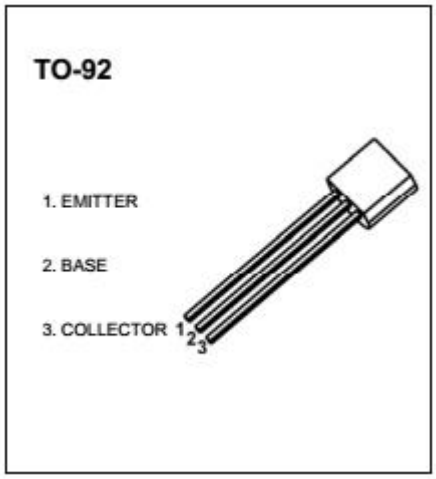
isc Silicon NPN Power Transistor 2N3904



DESCRIPTION

- Low Saturation Voltage-
  : $V_{CE(sat)}$= 200mV(Max)@ I_C =10mA
- Complement to Type 2N3906.

APPLICATIONS

- Designed for high-speed switching and Amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	200	mA
I_{CP}	Collector Current-Peak	300	mA
I_{BM}	Peak base current	100	mA
P_C	Collector Power Dissipation @T_C=25℃	625	mW
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	250	K/W

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=10μA, I_E=0	60		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C= 1mA , I_B=0	40		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E= 10μA, I_C=0	6		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 50mA; I_B= 5mA		0.3	V
$V_{BE(sat)}$	base-emitter saturation voltage	I_C= 50mA; I_B=5mA		0.95	V
I_{CBO}	collector cut-off current	V_{CB} =60 V,I_E = 0		0.1	uA
I_{CEO}	collector cut-off current	V_{CE}= 40V, I_B=0		0.1	uA
I_{EBO}	Emitter Cutoff Current	V_{EB}=5V; I_C=0		0.1	uA
h_{FE-1}	DC Current Gain	I_C= 10 mA ; V_{CE}= 1V	100	400	
h_{FE-2}	DC Current Gain	I_C= 50 mA ; V_{CE}= 1V	60		
h_{FE-3}	DC Current Gain	I_C= 100 mA ; V_{CE}= 1V	30		

Classification of h_{FE1}

Rank	O	Y	G
Range	100-200	200-300	300-400