

isc Silicon PNP Power Transistor

2SA1186

DESCRIPTION

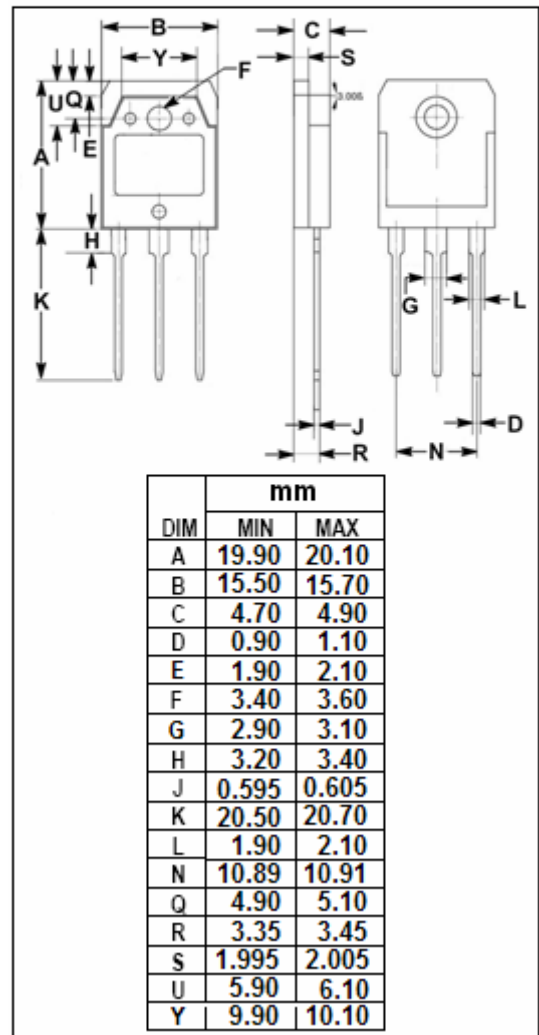
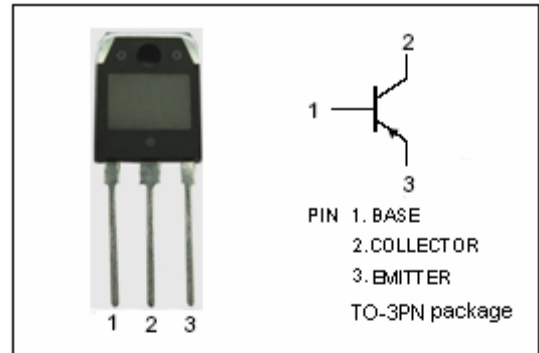
- High Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = -150V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SC2837

APPLICATIONS

- For audio and general purpose applications

ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-150	V
$V_{CEO}$	Collector-Emitter Voltage	-150	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-10	A
$I_B$	Base Current-Continuous	-2	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



## isc Silicon PNP Power Transistor

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## ELECTRICAL CHARACTERISTICS

 $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -25\text{mA}$ ; $I_B = 0$	-150			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -5.0\text{A}$ ; $I_B = -0.5\text{A}$			-2.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -150\text{V}$ ; $I_E = 0$			-100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ ; $I_C = 0$			-100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = -3\text{A}$ ; $V_{CE} = -4\text{V}$	50		180	
$C_{OB}$	Output Capacitance	$I_E = 0$ ; $V_{CB} = -80\text{V}$ ; $f = 1.0\text{MHz}$		110		pF
$f_T$	Current-Gain—Bandwidth Product	$I_E = 1\text{A}$ ; $V_{CE} = -12\text{V}$		60		MHz

## Switching times

$t_{on}$	Turn-on Time	$I_C = -5\text{A}$ , $R_L = 12\ \Omega$ , $I_{B1} = -I_{B2} = -0.5\text{A}$ , $V_{CC} = -60\text{V}$		0.25		$\mu\text{s}$
$t_{stg}$	Storage Time			0.8		$\mu\text{s}$
$t_f$	Fall Time			0.2		$\mu\text{s}$

◆  $h_{FE}$  Classifications

## O:50-80

O50	O60	O70
50-60	60-70	70-80

## P:80-130

P80	P90	P100	P110	P120
80-90	90-100	100-110	110-120	120-130

## Y:130-180

Y130	Y140	Y150	Y160	Y170
130-140	140-150	150-160	160-170	170-180