

**SPTECH Silicon NPN Power Transistor**

**2SC3856**

**DESCRIPTION**

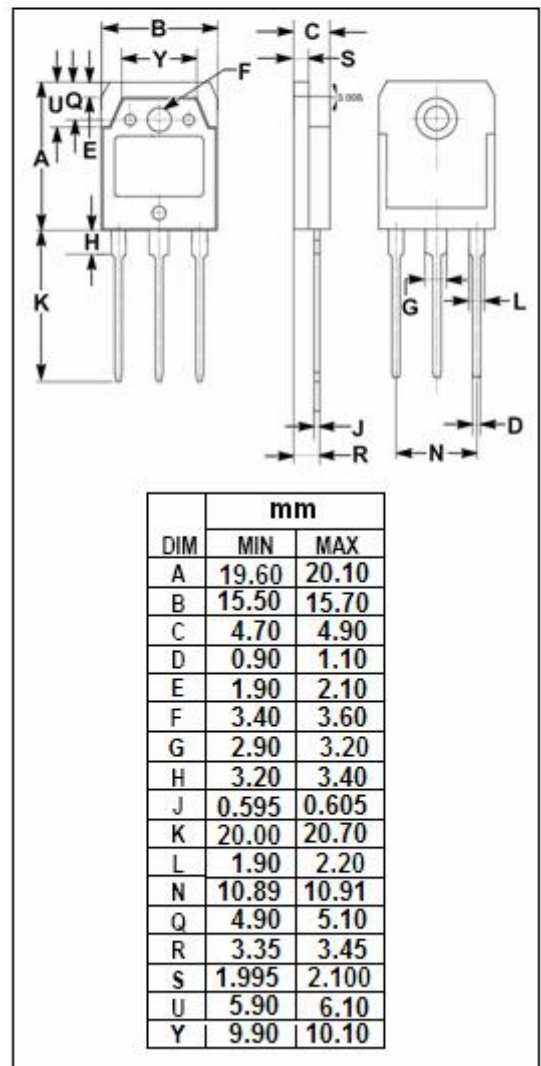
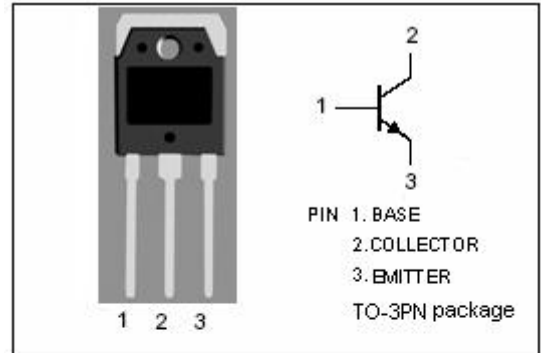
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO}=180V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SA1492

**APPLICATIONS**

- Designed for audio and general purpose applications

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	200	V
$V_{CEO}$	Collector-Emitter Voltage	180	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	15	A
$I_B$	Base Current-Continuous	4	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	130	W
$T_J$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C



**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	$I_C= 50\text{mA} ; I_B= 0$	180			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	$V_{CB}= 200\text{V} ; I_E= 0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 6\text{V}; I_C= 0$			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	$I_E= 0 ; V_{CB}= 10\text{V}; f_{test}= 1.0\text{MHz}$		300		pF
$f_T$	Current-Gain—Bandwidth Product	$I_E=-0.5\text{A} ; V_{CE}= 12\text{V}$		20		MHz

Switching times

$t_{on}$	Turn-on Time	$I_C= 10\text{A}, R_L= 4\ \Omega, I_{B1}= -I_{B2}= 1\text{A}, V_{CC}= 40\text{V}$		0.5		$\mu\text{s}$
$t_{stg}$	Storage Time			1.8		$\mu\text{s}$
$t_f$	Fall Time			0.6		$\mu\text{s}$

◆  **$h_{FE}$  Classifications**

O	P	Y
50-100	70-140	90-180