

INCHANGE Semiconductor

isc Product Specification

isc Silicon PNP Power Transistor

2SA490

DESCRIPTION

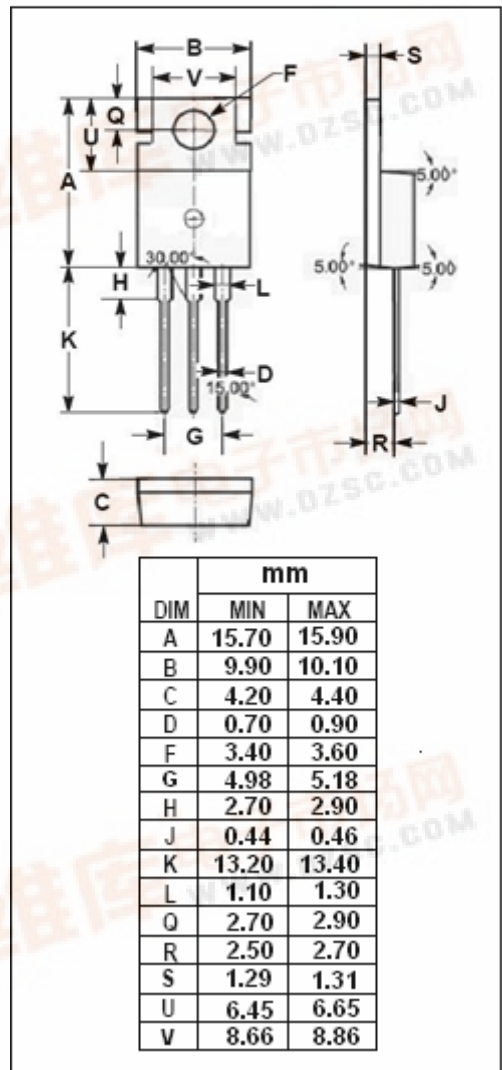
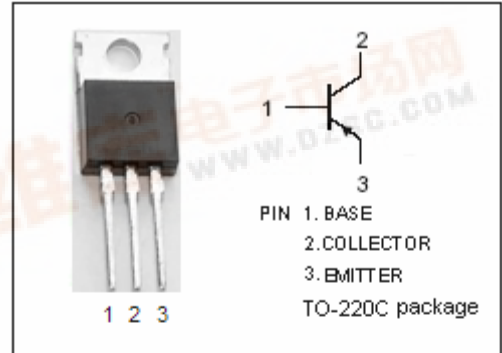
- High Collector Current:  $I_C = -3A$
- Collector-Emitter Breakdown Voltage :  $V_{(BR)CEO} = -40V(\text{Min})$
- Complement to Type 2SC790

APPLICATIONS

- 10 Watts output applications
- Power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-40	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-3	A
$I_E$	Emitter Current-Continuous	3	A
$P_C$	Total Power Dissipation @ $T_C=25^\circ\text{C}$	25	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



## isc Silicon PNP Power Transistor

2SA490

## 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	$I_C = -50\text{mA}$ ; $I_B = 0$	-40			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\text{mA}$ ; $I_C = 0$	-5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}$ ; $I_B = -0.2\text{A}$			-1.2	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -2\text{A}$ ; $V_{CE} = -2\text{V}$			-1.8	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -30\text{V}$ ; $I_E = 0$			-10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ ; $I_C = 0$			-100	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -0.5\text{A}$ ; $V_{CE} = -2\text{V}$	40		240	
$h_{FE-2}$	DC Current Gain	$I_C = -2\text{A}$ ; $V_{CE} = -2\text{V}$	13			
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}$ ; $V_{CE} = -2\text{V}$	3			MHz
$C_{OB}$	Output Capacitance	$I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f_{test} = 1\text{MHz}$		150		pF

◆  $h_{FE-1}$  Classifications

R	O	Y
40-80	70-140	120-240