

**isc Silicon PNP Power Transistor**

**BD540C**

**DESCRIPTION**

- DC Current Gain -  
:  $h_{FE} = 40(\text{Min.}) @ I_C = -0.5A$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -100V(\text{Min})$
- Complement to Type BD539C

**APPLICATIONS**

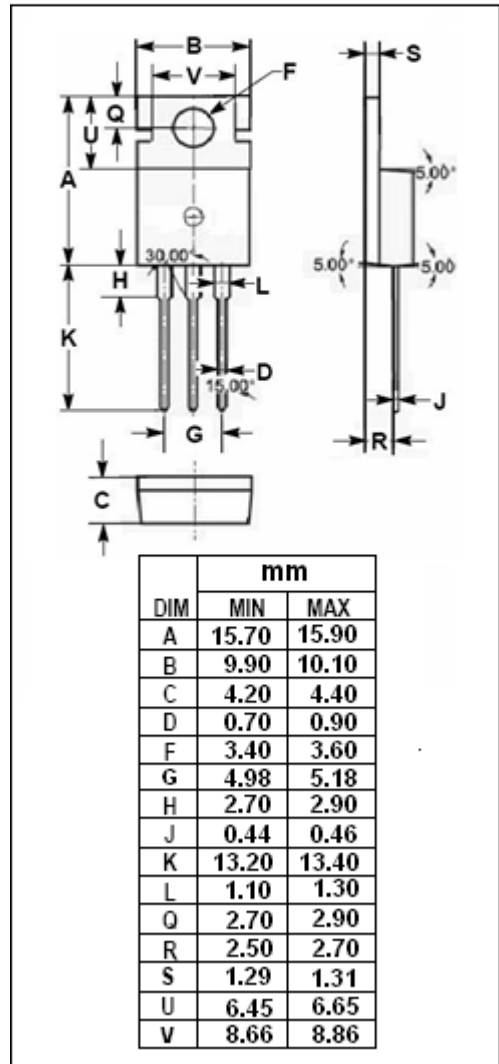
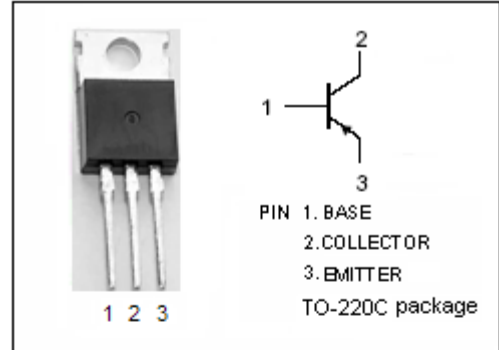
- Designed for use in medium power linear and switching applications.

**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-100	V
$V_{CEO}$	Collector-Emitter Voltage	-100	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-5	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ C$	2	W
	Collector Power Dissipation @ $T_C=25^\circ C$	45	
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	2.78	$^\circ C/W$
$R_{th j-a}$	Thermal Resistance, Junction to Ambient	62.5	$^\circ C/W$



**isc Silicon PNP Power Transistor****BD540C****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -30\text{mA}; I_B = 0$	-100		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -0.125\text{A}$		-0.25	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.375\text{A}$		-0.8	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	$I_C = -5\text{A}; I_B = -1\text{A}$		-1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -3\text{A}; V_{CE} = -4\text{V}$		-1.25	V
$I_{CEO}$	Collector Cutoff Current	$V_{CB} = -60\text{V}; I_B = 0$		-0.3	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE} = -100\text{V}; V_{BE} = 0$		-0.2	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$		-1.0	mA
$h_{FE-1}$	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -4\text{V}$	40		
$h_{FE-2}$	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -4\text{V}$	30		
$h_{FE-3}$	DC Current Gain	$I_C = -3\text{A}; V_{CE} = -4\text{V}$	12		