

**isc Silicon NPN Power Transistor**
**2SC2075**
**DESCRIPTION**

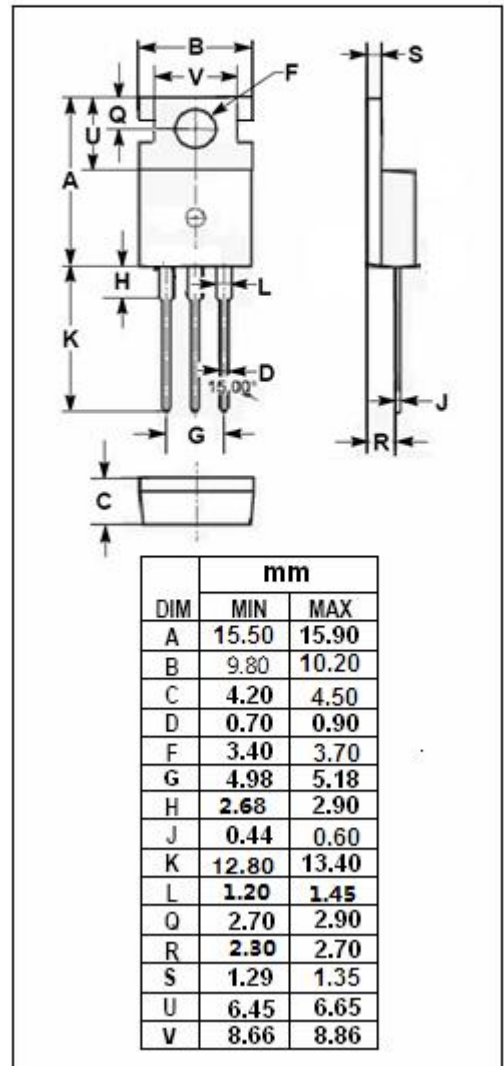
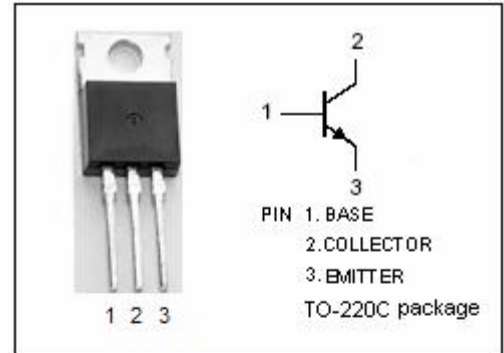
- High transition frequency
- Wide area of safe operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- 27MHz Power Amplifier Applications
- Recommended for output stage application of AM 4W transmitter

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CER}$	Collector-Emitter Voltage $R_{BE}=150\ \Omega$	80	V
$V_{EBO}$	Emitter-Base Voltage	4	V
$I_C$	Collector Current-Continuous	4	A
$I_E$	Emitter current	4	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	10	W
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



**isc Silicon NPN Power Transistor****2SC2075****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CER}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}$ ; $R_{BE}=500\ \Omega$	80			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}$ ; $I_C=0$	4			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}$ ; $I_B=0.3\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=30\text{V}$ ; $I_E=0$			10	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=500\text{mA}$ ; $V_{CE}=5\text{V}$	25			
$h_{FE-2}$	DC Current Gain	$I_C=3\text{A}$ ; $V_{CE}=2\text{V}$	15			
$C_{OB}$	Output Capacitance	$I_E=0$ ; $V_{CB}=10\text{V}$ ; $f_{test}=1\text{MHz}$		40		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C=500\text{mA}$ ; $V_{CE}=5\text{V}$		100		MHz
$P_O$	Output Power	$V_{CC}=12\text{V}$ ; $P_{in}=0.3\text{W}$ , $f=27\text{MHz}$	3.5			W

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