

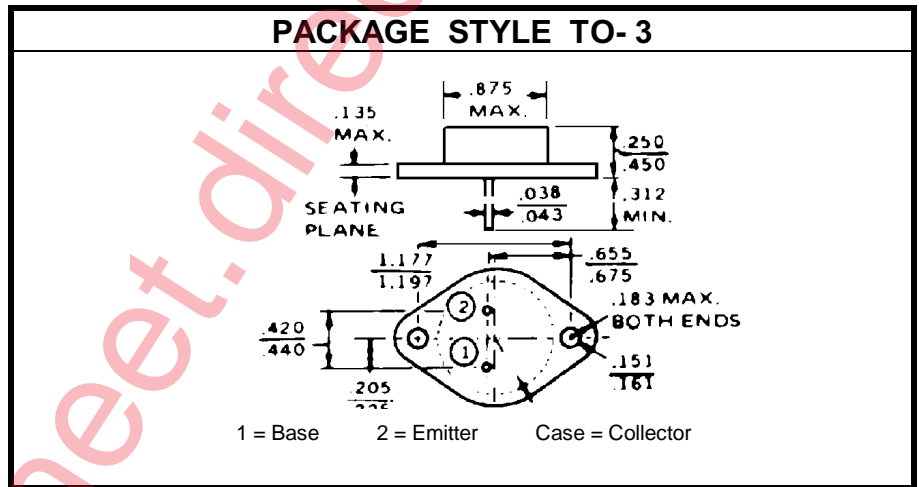
# SILICON NPN POWER TRANSISTOR

**DESCRIPTION:**

The **2N3442** is Designed for General Purpose Amplifier and Switching Applications.

**MAXIMUM RATINGS**

$I_C$	10 A
$I_B$	7.0 A
$V_{CE}$	140 V
$P_{DISS}$	117 W @ $T_C = 25^\circ C$
$T_J$	$-65^\circ C$ to $+200^\circ C$
$T_{STG}$	$-65^\circ C$ to $+200^\circ C$
$\theta_{JC}$	1.50 $^\circ C/W$


**CHARACTERISTICS**  $T_C = 25^\circ C$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{CEO}$	$I_C = 200 \text{ mA}$	140			V
$I_{CEX}$	$V_{CE} = 140 \text{ V}$ $V_{BE} = -1.5 \text{ V}$ $T_C = 150^\circ C$			5.0 30	mA
$I_{CEO}$	$V_{CE} = 140 \text{ V}$			200	mA
$I_{EBO}$	$V_{EB} = 7.0 \text{ V}$			5.0	mA
$h_{FE}$	$V_{CE} = 4.0 \text{ V}$ $I_C = 3.0 \text{ A}$ $V_{CE} = 4.0 \text{ V}$ $I_C = 10 \text{ A}$	20 7.5		70	---
$V_{CE(SAT)}$	$I_C = 10 \text{ A}$ $I_B = 2.0 \text{ A}$			5.0	V
$V_{BE(ON)}$	$V_{CE} = 4.0 \text{ V}$ $I_C = 10 \text{ A}$			5.7	V
$f_t$	$V_{CE} = 4.0 \text{ V}$ $I_C = 2.0 \text{ A}$ $f = 40 \text{ KHz}$	80			KHz
$h_{fe}$	$V_{CE} = 4.0 \text{ V}$ $I_C = 2.0 \text{ A}$ $f = 1.0 \text{ KHz}$	12		72	---