

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

TIP35, A, B, C NPN  
TIP36, A, B, C PNP

COMPLEMENTARY SILICON  
POWER TRANSISTORS

T0-3P CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR TIP35, TIP36 Series types are Complementary Silicon Power Transistors manufactured by the Epitaxial-Base Process designed for high current amplifier and switching applications.

## MAXIMUM RATINGS ( $T_C=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	TIP35 TIP36	TIP35A TIP36A	TIP35B TIP36B	TIP35C TIP36C	UNIT
Collector-Base Voltage	$V_{CBO}$	40	60	80	100	V
Collector-Emitter Voltage	$V_{CEO}$	40	60	80	100	V
Emitter-Base Voltage	$V_{EBO}$		5.0			A
Collector Current	$I_C$		25			A
Collector Current (Peak)	$I_{CM}$		40			A
Base Current	$I_B$		5.0			A
Power Dissipation	$P_D$		125			W
Operating and Storage Junction Temperature	$T_J, T_{stg}$		-65 TO +150			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		1.0			$^\circ\text{C}/\text{W}$

## ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	TIP35 TIP36		TIP35A TIP36A		TIP35B TIP36B		TIP35C TIP36C		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
$I_{CEO}$	$V_{CE}=30\text{V}$		1.0		1.0		-		-	mA
$I_{CEO}$	$V_{CE}=60\text{V}$		-		-		1.0		1.0	mA
$I_{CES}$	$V_{CE}=\text{Rated } V_{CEO}$		0.7		0.7		0.7		0.7	mA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		1.0		1.0		1.0		1.0	mA
$BV_{CEO}$	$I_C=30\text{mA}$	40		60		80		100		V
$V_{CE}(\text{SAT})$	$I_C=15\text{A}, I_B=1.5\text{A}$		1.8		1.8		1.8		1.8	V
$V_{CE}(\text{SAT})$	$I_C=25\text{A}, I_B=5.0\text{A}$		4.0		4.0		4.0		4.0	V
$V_{BE}(\text{ON})$	$V_{CE}=4.0\text{V}, I_C=15\text{A}$		2.0		2.0		2.0		2.0	V
$V_{BE}(\text{ON})$	$V_{CE}=4.0\text{V}, I_C=25\text{A}$		4.0		4.0		4.0		4.0	V
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=1.5\text{A}$	25		25		25		25		
$h_{FE}$	$V_{CE}=4.0\text{V}, I_C=15\text{A}$	10	50	10	50	10	50	10	50	
$h_{fe}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}, f=1.0\text{kHz}$	25		25		25		25		
$f_T$	$V_{CE}=10\text{V}, I_C=1.0\text{A}, f=1.0\text{MHz}$	300		300		300		300		MHz