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Manufacturers of World Class Discrete Semiconductors

2N6724

2N6725

NPN SILICON DARLINGTON
POWER TRANSISTOR

JEDEC TO-237 CASE (EBC)

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N6724, 2N6725 are Silicon NPN Darlington Power Transistors designed for amplifier applications.

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

	SYMBOL	2N6724	2N6725	UNIT
Collector-Base Voltage	V_{CB0}	50	60	V
Collector-Emitter Voltage	V_{CE0}	40	50	V
Emitter-Base Voltage	V_{EB0}	12		V
Collector Current	I_C	2.0		A
Base Current	I_B	500		mA
Power Dissipation ($T_C=25^{\circ}\text{C}$)	P_D	2.0		W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 TO +150		$^{\circ}\text{C}$
Thermal Resistance	θ_{JC}	62.5		$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

SYMBOL	TEST CONDITIONS	2N6724		2N6725		UNIT
		MIN	MAX	MIN	MAX	
I_{CB0}	$V_{CB}=30\text{V}$		0.1		-	μA
I_{CB0}	$V_{CB}=40\text{V}$		-		0.1	μA
I_{EB0}	$V_{EB}=10\text{V}$		0.1		0.1	μA
BV_{CB0}	$I_C=1.0\mu\text{A}$	50		60		V
BV_{EB0}	$I_E=10\mu\text{A}$	12		12		V
BV_{CES}	$I_C=1.0\text{mA}$	40		50		V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=2.0\text{mA}$		1.5		1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$		2.0		2.0	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=200\text{mA}$	25,000		25,000		
h_{FE}	$V_{CE}=5.0\text{V}, I_C=1.0\text{A}$	4,000	40,000	4,000	40,000	
f_T	$V_{CE}=5.0\text{V}, I_C=200\text{mA}, f=100\text{MHz}$	1.0	10	1.0	10	MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		10		10	pF