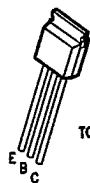


2N6724/MPS6724/2N6725/MPS6725



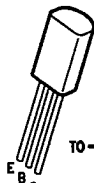
2N6724
2N6725

MPS6724
MPS6725



TO-237

TL/G/10100-8



TO-226AE

TL/G/10100-4

NPN Darlington Transistor

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage, (Note 1) ($I_C = 1.0 \text{ mAdc}, I_B = 0$)	2N6724/MPS6724 40	2N6725/MPS6725 50	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C = 1.0 \mu\text{Adc}, I_E = 0$)	2N6724/MPS6724 50	2N6725/MPS6725 60	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E = 10 \mu\text{Adc}, I_C = 0$)	12		Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB} = 30 \text{ Vdc}, I_E = 0$) ($V_{CB} = 40 \text{ Vdc}, I_E = 0$)	2N6724/MPS6724 2N6725/MPS6725	100 100	nAdc
I_{EBO}	Emitter Cutoff Current ($V_{EB} = 10 \text{ Vdc}, I_C = 0$)		100	nAdc
ON CHARACTERISTICS (Note 1)				
h_{FE}	DC Current Gain ($I_C = 200 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$) ($I_C = 1000 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$)	25,000 4,000	40,000	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C = 1000 \text{ mAdc}, I_B = 2.0 \text{ mAdc}$)		1.5	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage ($I_C = 1000 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}$)		2.0	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current-Gain—Bandwidth Product ($I_C = 200 \text{ mAdc}, V_{CE} = 5.0 \text{ Vdc}, f = 100 \text{ MHz}$)	100	1000	MHz
C_{cb}	Collector-Base Capacitance ($V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 1.0 \text{ MHz}$)		10	pF

Note 1: Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$.

Note 2: For characteristics curves, see Process 05.