

2N5428
thru
2N5430



*MAXIMUM RATINGS				
Rating	Symbol	2N5428	2N5429 2N5430	Unit
Collector-Emitter Voltage	V _{CEO}	80	100	Vdc
Collector-Base Voltage	V _{CB}	80	100	Vdc
Emitter-Base Voltage	V _{EB}	6.0		Vdc
Collector Current - Continuous	I _C	7.0		Adc
Base Current	I _B	1.0		Adc
Total Device Dissipation @ T _C = 25°C Derate above 25°C	P _D	40	228	Watts mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-65 to +200		°C
THERMAL CHARACTERISTICS				
Characteristic	Symbol	Max	Unit	
Thermal Resistance, Junction to Case	θ _{JC}	4.37	°C/W	

* Indicates JEDEC Registered Data

*ELECTRICAL CHARACTERISTICS (T_C = 25°C, unless otherwise noted)

Characteristic	Fig. No.	Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Sustaining Voltage (1) (I _C = 50 mA, I _B = 0)		V _{CEO(sus)} *	80	-	Vdc
			100	-	
Collector Cutoff Current (V _{CE} = 75 Vdc, I _B = 0) (V _{CE} = 90 Vdc, I _B = 0)		I _{CEO}	-	100	μA
			-	100	
Collector Cutoff Current (V _{CE} = 75 Vdc, V _{EB(off)} = 1.5 Vdc) (V _{CE} = 90 Vdc, V _{EB(off)} = 1.5 Vdc) (V _{CE} = 75 Vdc, V _{EB(off)} = 1.5 Vdc, T _C = 150°C) (V _{CE} = 90 Vdc, V _{EB(off)} = 1.5 Vdc, T _C = 150°C)	12	I _{CEX}	-	10	μA
			-	10	
			-	1.0	mA
			-	1.0	
Collector Cutoff Current (V _{CB} = Rated V _{CB} , I _E = 0)		I _{CBO}	-	10	μA
Emitter Cutoff Current (V _{BE} = 6.0 Vdc, I _C = 0)		I _{EBO}	-	100	μA
ON CHARACTERISTICS (1)					
DC Current Gain (I _C = 500 mA, V _{CE} = 2.0 Vdc) (I _C = 2.0 A, V _{CE} = 2.0 Vdc) (I _C = 5.0 A, V _{CE} = 2.0 Vdc)	8	h _{FE} *	30	-	-
			60	-	
			30	120	
			60	240	
			20	-	
			40	-	
Collector-Emitter Saturation Voltage (I _C = 2.0 A, I _B = 0.2 A) (I _C = 7.0 A, I _B = 0.7 A)	9, 11, 13	V _{CE(sat)} *	-	0.7	Vdc
			-	1.2	
Base-Emitter Saturation Voltage (I _C = 2.0 A, I _B = 0.2 A) (I _C = 7.0 A, I _B = 0.7 A)	11, 13	V _{BE(sat)} *	-	1.2	Vdc
			-	2.0	
DYNAMIC CHARACTERISTICS					
Current-Gain-Bandwidth Product (I _C = 500 mA, V _{CE} = 10 Vdc, f = 10 MHz)		f _T	30	-	MHz
Output Capacitance (V _{CB} = 10 Vdc, I _E = 0, f = 100 kHz)	7	C _{ob}	-	250	pF
Input Capacitance (V _{BE} = 2.0 Vdc, I _C = 0, f = 100 kHz)	7	C _{ib}	-	1,000	pF
SWITCHING CHARACTERISTICS					
Delay Time (V _{CC} = 40 Vdc, V _{EB(off)} = 3.0 Vdc)	2, 3	t _d	-	100	ns
Rise Time (I _C = 2.0 A, I _{B1} = 200 mA)		t _r	-	100	ns
Storage Time (V _{CC} = 40 Vdc, I _C = 2.0 A)	2, 6	t _s	-	2.0	μs
Fall Time (I _{B1} = I _{B2} = 200 mA)		t _f	-	200	ns

* Indicates JEDEC Registered Data (1) Pulse Test: Pulse Width = 300 μs, Duty Cycle = 2.0%.

