

3918590 GENERAL SEMICONDUCTOR

95D 02132 D



NPN SWITCHING POWER TRANSISTORS

This unique series utilizes General Semiconductor Industries' C²R[®] process which describes a manufacturing technology that provides surface stabilization for high voltage operation and enhances long term reliability.

7-33-07
NPN
225, 275, 325V
1.0 AMP SWITCHING

TO-66

*MAXIMUM RATINGS (T _c = 25°C unless otherwise noted.)					
RATING	SYMBOL	2N6233	2N6234	2N6235	UNIT
Collector-Base Voltage	V _{CBO}	250	300	350	Volts
Collector-Emitter Voltage	V _{CEO}	225	275	325	Volts
Emitter-Base Voltage	V _{EBO}	6.0	6.0	6.0	Volts
Collector Current—Continuous	I _c	5.0	5.0	5.0	Amps
Peak	I _{CM}	10	10	10	Amps
Base Current—Continuous	I _B	2.0	2.0	2.0	Amps
Total Power Dissipation @T _c = 25°C	P _D	50	50	50	Watts
Junction to Case Thermal Resistance	R _{θJC}	3.5	3.5	3.5	°C/W
Operating and Storage Junction Temperature Range	T _{J(oper)} T _{stg}	-65 to +200	-65 to +200	-65 to +200	°C

*ELECTRICAL CHARACTERISTICS (T _c = 25°C unless otherwise noted)								
SYMBOL	CONDITIONS	2N6233		2N6234		2N6235		Unit
		Min	Max	Min	Max	Min	Max	
V _{CE(sat)}	I _c = 20mA	225	—	275	—	325	—	Volts
I _{CEX}	V _{BE} = -1.5V, T _c = 150°C	—	1.0	—	—	—	—	mA
	V _{CE} = 250V—2N6233	—	—	—	1.0	—	—	
	V _{CE} = 300V—2N6234 V _{CE} = 350V—2N6235	—	—	—	—	—	1.0	
I _{CBO}	V _{CB} = 225V—2N6233	—	0.1	—	—	—	—	mA
	V _{CB} = 300V—2N6234	—	—	—	0.1	—	—	
	V _{CB} = 350V—2N6235	—	—	—	—	—	0.1	
I _{EBO}	V _{EB} = 6.0V	—	0.1	—	0.1	—	0.1	mA
I _{CEO}	V _{CE} = 225—2N6233	—	1.0	—	—	—	—	mA
	V _{CE} = 275V—2N6234	—	—	—	1.0	—	—	
	V _{CE} = 325V—2N6235	—	—	—	—	—	1.0	
h _{FE} †	V _{CE} = 5.0V, I _c = 0.1A	25	—	25	—	25	—	
h _{FE} †	V _{CE} = 5.0V, I _c = 1.0A	25	125	25	125	25	125	
h _{FE} †	V _{CE} = 5.0V, I _c = 3.0A	10	—	10	—	10	—	
V _{CE(sat)} †	I _c = 5.0A, I _B = 1.0A	—	2.5	—	2.5	—	2.5	Volts
V _{CE(sat)} †	I _c = 1.0A, I _B = 0.1A	—	0.5	—	0.5	—	0.5	Volts
V _{BE(sat)} †	I _c = 5.0A, I _B = 1.0A	—	2.0	—	2.0	—	2.0	Volts
V _{BE(sat)} †	I _c = 1.0A, I _B = 0.1A	—	1.0	—	1.0	—	1.0	Volts
V _{BE(on)} †	V _{CE} = 5.0V, I _c = 1.0A	—	1.0	—	1.0	—	1.0	Volts
h _{FE}	V _{CE} = 10V, I _c = 0.25A, f = 10MHz	2.0	—	2.0	—	2.0	—	
C _{OBO}	V _{CB} = 10V, f = 0.1MHz	—	250	—	250	—	250	pF
SWITCHING								
t _r	Resistive Load V _{CC} = 200V I _c = 1.0A I _{B1} = I _{B2} = 100mA t _p = 10μs	—	0.5	—	0.5	—	0.5	μs
t _s		—	3.5	—	3.5	—	3.5	μs
t _f		—	0.5	—	0.5	—	0.5	μs

*JEDEC registered data. † Pulse Conditions: Width = 300μs; Duty Cycle ≤ 2% (measured using Kelvin connections).