

High-speed Switching Transistor (60V, 12A)

2SC5526

●Features

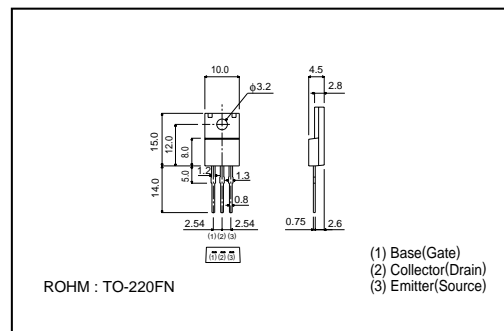
- 1) Low saturation voltage, typically $V_{CE(sat)} = 0.15V$ at $I_C / I_B = 6A / 0.3A$.
- 2) High switching speed, typically $t_f = 0.1\mu s$ at $I_C = 6A$.
- 3) Wide SOA. (safe operating area)
- 4) Complements the 2SA2007.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	100	V
Collector-emitter voltage	V_{CEO}	60	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	12	A(DC)
		20	A(Pulse) *
Collector power dissipation	P_C	2	W
		25	W(Tc=25°C)
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55 - +150	°C

* Single pulse, $P_w = 100ms$

●External dimensions (Units: mm)



●Packaging specifications and hFE

Type	2SC5526
Package	TO-220FN
hFE	EF
Code	-
Basic ordering unit (pieces)	500

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	100	-	-	V	$I_C = 50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	60	-	-	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EBO}	5	-	-	V	$I_E = 50\mu A$
Collector cutoff current	I_{CBO}	-	-	10	μA	$V_{CB} = 100V$
Emitter cutoff current	I_{EBO}	-	-	10	μA	$V_{EB} = 5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.3	V	$I_C / I_B = 6A / 0.3A$
		-	-	0.5	V	$I_C / I_B = 8A / 0.4A$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	1.2	V	$I_C / I_B = 6A / 0.3A$
		-	-	1.5	V	$I_C / I_B = 8A / 0.4A$
DC current transfer ratio	hFE	100	-	320	-	$V_{CE} / I_C = 2V / 2A$
Transition frequency	fr	-	80	-	MHz	$V_{CB} = 10V, I_E = 1A, f = 30MHz$
Output capacitance	Cob	-	200	-	pF	$V_{CE} = 10V, I_E = 0A, f = 1MHz$
Turn-on time	ton	-	-	0.3	μs	$I_C = 6A, R_L = 5\Omega$
Storage time	tstg	-	-	1.5	μs	$I_{B1} = -I_{B2} = 0.3A$
Fall time	tr	-	0.1	0.3	μs	$V_{CC} = 30V$

* Measured using pulse current