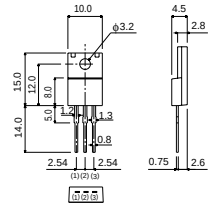
High-voltage Switching Transisitor (Power Supply) (120V, 7A)

2SC5575

●Features

1) Low $V_{CE(sat)}$. (Typ. 0.17V at I_C / I_B = 5 / 0.5A)
2) Fast switching. (tf : Typ. 0.18μs at I_C = 5A)
3) Wide SOA. (safe operating area)

●External dimensions (Units : mm)



(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

ROHM : TO-220FN

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	250	V
Collector-emitter voltage	V_{CEO}	120	V
Emitter-base voltage	V_{EBO}	12	V
Collector current	I_C	7	A
		15	A(t=100ms)
Collector power dissipation	P_C	2	W
		25	W(Tc=25°C)
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55 ~ +150	°C

●Packaging specifications and h_{FE}

Type	2SC5575
Package	TO-220FN
h_{FE}	E
Code	–
Basic ordering unit (pieces)	500

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	$V_{CEX(SUS)}$	125	—	—	V	I_{CP}=8A,I_{B1}=−I_{B2}=0.5A,I_C=5A,L=200μH clamped
Collector cutoff current	I_{CBO}	—	—	10	μA	V_{CB}=100V
Collector cutoff current	I_{EBO}	—	—	10	μA	V_{EB}=12V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.6	V	I_C/I_B=5A/0.5A
Base-emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	I_C/I_B=5A/0.5A
DC current transfer ratio	h_{FE}	100	—	200	—	V_{CE}/I_C=5V/3A
Transition frequency	f_T	—	20	—	MHz	V_{CE}=10V,I_E=−0.5A
Output capacitance	Cob	—	150	—	pF	V_{CB}=10V,I_E=0A , f=1MHz
Turn-on time	ton	—	—	0.5	μs	I_C=5A,R_L=10Ω
Storage time	tstg	—	—	2.5	μs	I_{B1}=−I_{B2}=0.5A
Fall time	tf	—	—	0.5	μs	V_{CC}≒50V
Collector cutoff current	I_{CEO}	—	—	2	mA	V_{CE}=100V,Ta=125°C