

Transistors

For Motor / Relay drive (120V, 6A)

2SD2615

●Structure

NPN Silicon Epitaxial Planar Transistor
(Darlington connection)

●Features

- 1) Darlington connection , high h_{FE} .
- 2) Resistor inbetween base-emitter.
- 3) Built-in damper diode.

●Applications

Relay drive
Motor drive

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	120	V
Collector-emitter voltage	V_{CEO}	120	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	DC	I_C	6 A
	Pulse	I_{CP}	10 A *1
Collector power dissipation	P_C	2	W(Ta=25°C)
		30	W(Tc=25°C)
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

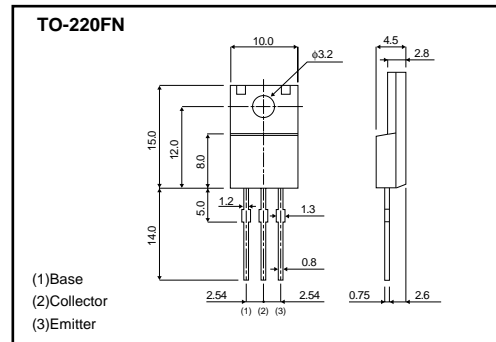
*1 t=100ms

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	120	-	-	V	$I_C=5mA$
Collector-base breakdown voltage	BV_{CBO}	120	-	-	V	$I_C=50\mu A$
Collector cutoff current	I_{CBO}	-	-	100	μA	$V_{CB}=120V$
Emitter cutoff current	I_{EBO}	-	-	3	mA	$V_{EB}=5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	1.5	V	$I_C/I_B=3A/6mA$ *1
DC current gain	h_{FE}	2k	-	20k	-	$V_{CE}=3V, I_C=2A$ *1
Transition frequency	f_T	-	40	-	MHz	$V_{CE}=5V, I_E=-0.2A, f=10MHz$ *2
Collector output capacitance	C_{ob}	-	50	-	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

*1 Pulse test *2 Transition frequency of the device

●External dimensions (Unit : mm)



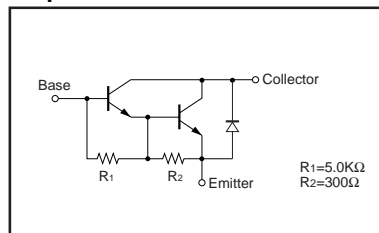
●Complements

PNP	NPN
2SB1674	2SD2615

●Packaging specifications and hFE

Type	hFE	Package	Taping
		Code	-
2SD2615		Basic ordering unit (pieces)	500
			○

●Equivalent circuit



Appendix

Notes

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