

Medium Power Transistor (Motor, Relay drive) (60±10V, 5A)

2SD2614

●Features

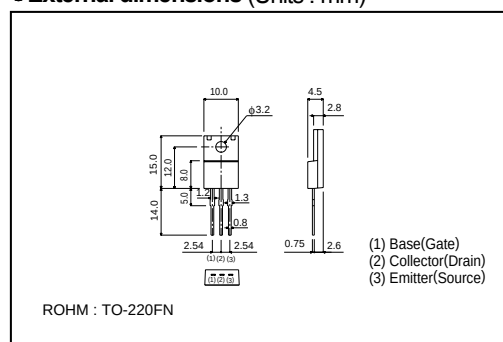
- 1) Built-in zener diode between collector and base.
- 2) Strong protection against reverse surges due to "L" loads.
- 3) Built-in resistor between base and emitter.
- 4) Built-in damper diode.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CBO}	60±10	V
Collector-emitter voltage	V _{CEO}	60±10	V
Emitter-base voltage	V _{EB0}	6	V
Collector current	I _C	5	A (DC)
		10	A (Pulse) *
Collector power dissipation	P _C	2	W
		25	W (T _C = 25°C)
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55~+150	°C

* Single pulse P_w = 10ms

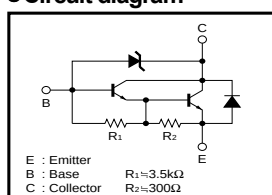
●External dimensions (Units : mm)



●Packaging specifications and h_{FE}

Type	2SD2614
Package	TO-220FN
h _{FE}	2k~30k
Code	-
Basic ordering unit (pieces)	500

●Circuit diagram



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CBO}	50	-	70	V	I _C = 50μA
Collector-emitter breakdown voltage	BV _{CEO}	50	-	70	V	I _C = 5mA
Collector cutoff current	I _{CBO}	-	-	10	μA	V _{CB} = 40V
Emitter cutoff current	I _{EB0}	-	-	3	mA	V _{EB} = 5V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	1.5	V	I _C /I _B = 2A/2mA *
DC current transfer ratio	h _{FE}	2000	-	30000	-	V _{CE} /I _C = 3V/2A *
Output capacitance	C _{ob}	-	75	-	pF	V _{CB} = 10V, I _E = 0A, f = 1MHz

* Measured using pulse current.