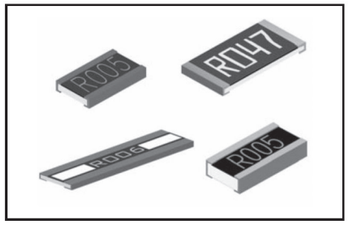
Current Sensing Chip Resistor

- 3W Rating in 1W size, 1225 Package
- Low TCR from ±100 ~ ±600 PPM/℃
- Resistance Values from 1m to 1000m ohm
- High Purity Alumina Substrate for High Power Dissipation



■ GENERAL SPECIFICATIONS

Model	Power Rating	Operating Temp. Range	Resistance Tolerance (%)	Resistance Range[Ω]	TCR[ppm/℃]
CS02(0402)	1/16W	-55 ~ +155℃	F [±1] G [±2] J [±5]	50m ~ 100m	±400
				101m ~ 500m	±300
				501m ~ 1000m	±200
CS03(0603)	1/10W			20m ~ 50m	±600
				51m ~ 100m	±400
				101m ~ 500m	±300
				501m ~ 1000m	±200
CS05(0805)	1/8W			20m ~ 50m	±600
				51m ~ 100m	±400
				101m ~ 500m	±300
				501m ~ 1000m	±200
CS06(1206)	1/4W			10m ~ 20m	±600
				21m ~ 50m	±400
				51m ~ 500m	±300
				501m ~ 1000m	±200
CS12(2512)	1W			3m ~ 5m	±300
				6m ~ 20m	±200
				21m ~ 30m	±150
				31m ~ 300m	±100
CS25(1225)	3W			10m ~ 19m	±300
				20m ~ 500m	±150
CS37(3720)	1W		G [±2], J [±5]	1m ~ 4m	±300
CS75(7520)	2W		F [±1], G [±2], J [±5]	5m ~ 10m	±200
				11m ~ 350m	±150

■ CHARACTERISTICS

Values in [ ] mean change in Ω after test

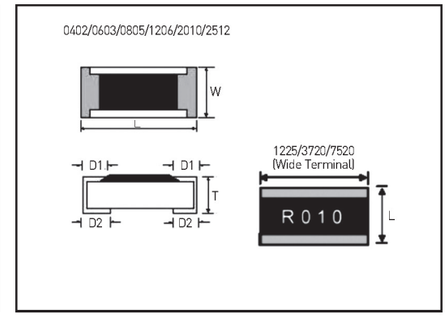
Temp. Coefficient of Resistance	As Spec	MIL-STD-202F Method 304	+25/-55/+25/+125/+25℃
Short Time Overload	±[0.5%+0.05Ω]	JIS-C-5202-5.5	RCWV*2.5 or maximum Overloading Voltage, 5sec.
Dielectric Withstanding Voltage	By Type	MIL-STD-202F Method 301	Apply maximum Overload Voltage for 1minute
Insulation Resistance	>1000MΩ	MIL-STD-202F-Method 302	Apply 100VDC for 1minute
Thermal Shock	±[0.5%+0.05Ω]	MIL-STD-202F Method 107G	-55℃~150℃, 100cycles
Load Life	±[1.0%+0.05Ω]	MIL-STD-202F Method 108A	RCWV, 70℃ 1.5hours on, 0.5hours off for 100~1048hours
Humidity(Steady State)	±[0.5%+0.05Ω]	MIL-STD-202F Method 103B	40℃, 90~95%RH, RCWV 1.5hours on, 0.5hours off for 1000~1048hours
Resistance to Dry Heat	±[0.5%+0.05Ω]	JIS-C-5202-7.2	96hours at +155℃ without load
Low Temperature Operation	±[0.5%+0.05Ω]	JIS-C-5202-7.1	1hours, -65℃ followed by 45minute of RCWV
Bending Strength	As Spec.	JIS-C-5202-6.1.4	Bending Amplitude 3mm for 10sec.
Solerability	95% minimum. coverage	MIL-STD-202F Method 208H	245±5℃, 2±0.5sec.
Resistance to Soldering Heat	±[0.5%+0.05Ω]	MIL-STD-202F Method 210E	260±5℃, 10±1sec.

* Storage Temperature: 25±3℃; Humidity < 0% RH

RARA CS RoHS COMPLIANT

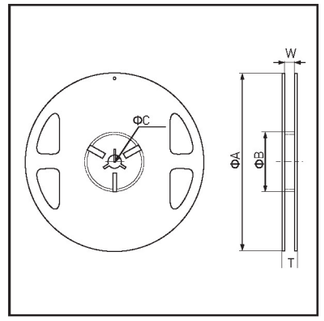
■ DIMENSIONS [mm]

Model	Dimensions [mm]				
	L	W	T	D1	D2
CS02	1.00±0.05	0.50±0.05	0.32±0.10	0.20±0.10	0.20±0.10
CS03	1.60±0.10	0.80±0.10	0.45±0.10	0.30±0.20	0.30±0.20
CS05	2.00±1.15	1.25±0.15	0.55±0.10	0.30±0.20	0.40±0.25
CS06	3.05±0.15	1.55±0.15	0.55±0.10	0.50±0.30	0.40±0.25
CS10	5.00±0.20	2.45±0.15	0.60±0.15	0.60±0.30	0.50±0.25
CS12	6.35±0.20	3.15±0.15	0.60±0.10	0.60±0.30	0.55±0.25
CS25	3.10±0.15	6.30±0.15	0.90±0.15	0.60±0.30	0.55±0.25
CS37	2.00±0.20	3.72±0.20	0.60±0.10	0.40±0.20	0.40±0.20
CS75	2.00±0.20	7.50±0.30	0.60±0.10	0.40±0.20	0.40±0.20

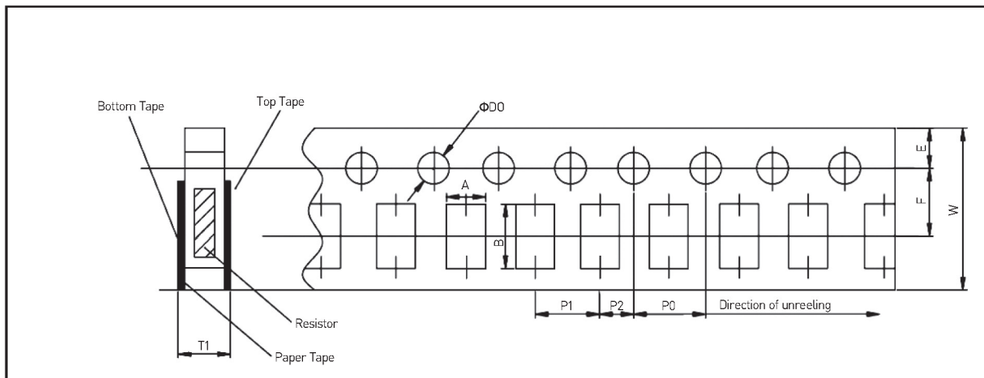


■ REEL SPECIFICATIONS

Model	Dimensions [mm]					Paper Tape [pcs]	Emboss Plastic Tape[pcs]
	ΦA	ΦB	ΦC	W	T		
CS02	178±1	60.0±1.0	13.0±0.20	9.00±0.50	12.0±0.15	10,000	-
CS03	178±1	60.0±1.0	13.0±0.20	9.00±0.50	12.0±0.15	5,000	-
CS05	178±1	60.0±1.0	13.0±0.20	9.00±0.50	12.0±0.15	5,000	-
CS06	178±1	60.0±1.0	13.0±0.20	9.00±0.50	12.0±0.15	5,000	-
CS10	178±1	60.2±1.0	13.0±0.50	13.2±1.50	16.0±0.20	-	4,000
CS12	178±1	60.2±1.0	13.0±0.50	13.2±1.50	16.0±0.20	-	4,000
CS25	178±1	60.2±1.0	13.0±0.50	13.2±1.50	16.0±0.20	-	2,000
CS37	178±1	60.2±1.0	13.0±0.50	13.2±1.50	16.0±0.20	-	2,000
CS75	178±1	60.2±1.0	13.0±0.50	17.0±1.50	19.0±1.00	-	2,000

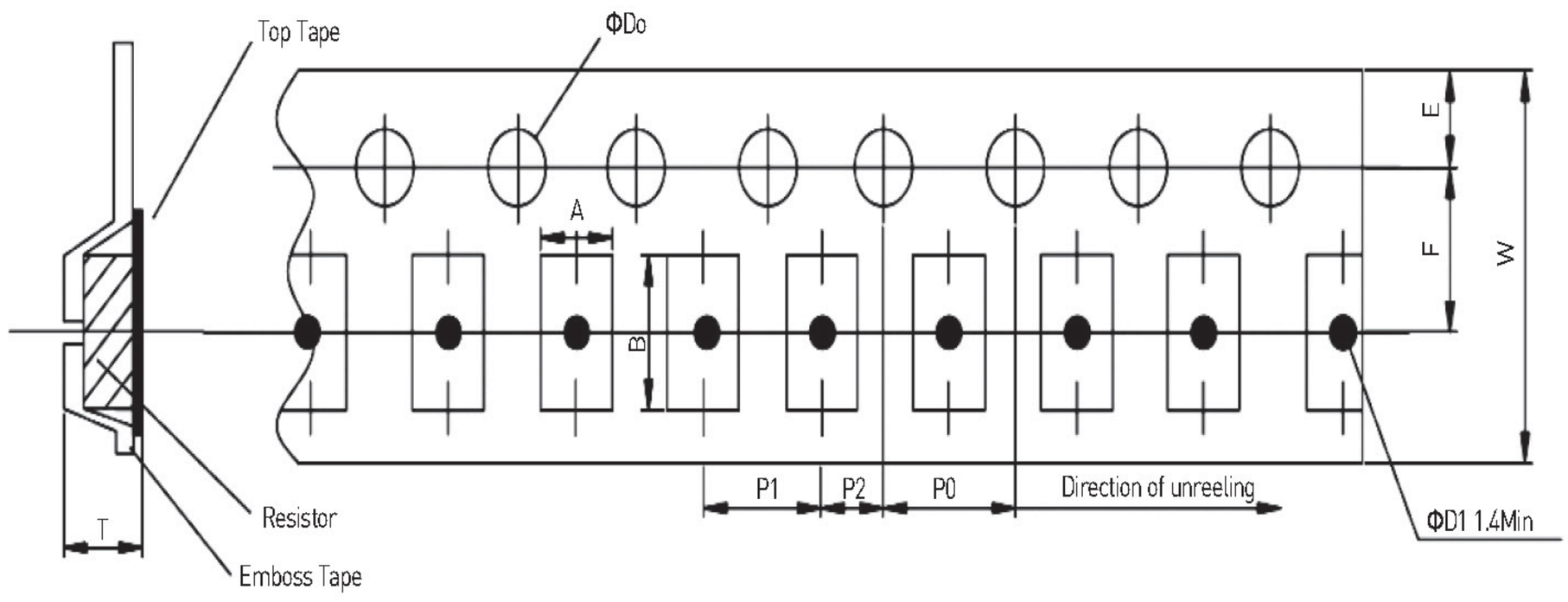


■ PAPER TAPE SPECIFICATIONS



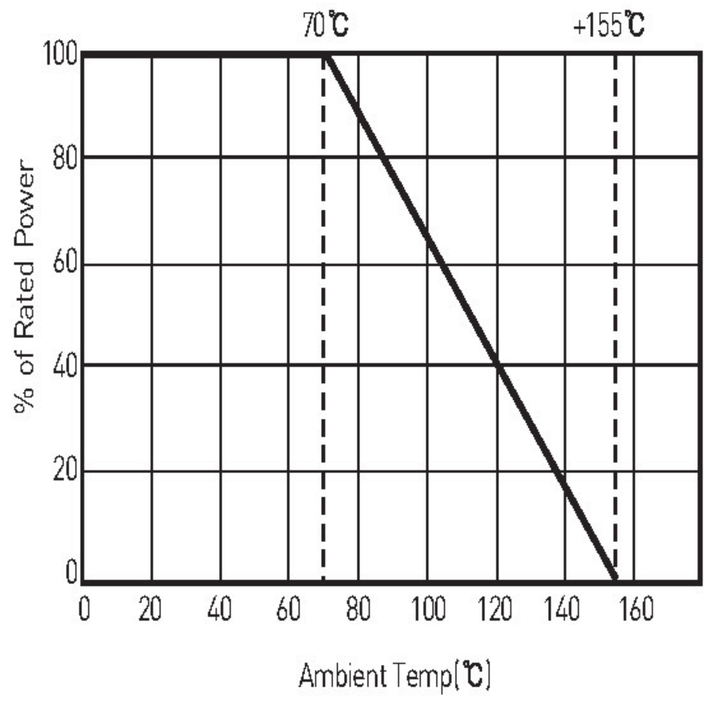
Model	Dimensions [mm]									
	A	B	W	E	F	P0	P1	P2	ΦD0	T
CS02	0.70±0.05	1.16±0.05	8.00±0.10	1.75±0.05	3.5±0.05	4.00±0.10	2.00±0.05	2.00±0.05	1.55±0.05	0.40±0.03
CS03	1.10±0.05	1.90±0.05					4.00±0.10			0.60±0.03
CS05	1.60±0.05	2.37±0.05								0.75±0.05
CS06	2.00±0.05	3.55±0.05								

■ EMBOSS PALSTIC TAPE SPECIFICATION



Model	Dimensions [mm]									
	A	B	W	E	F	P0	P1	P2	ΦDO	T
CS10	2.85±0.10	5.45±0.10	12.0±0.10	1.75±0.10	5.5±0.05	4.00±0.05	4.00±0.10	2.00±0.05	1.50+0.10	1.00±0.20
CS12	3.40±0.10	6.65±0.10	12.0±0.10		5.5±0.05	4.00±0.05			1.50+0.10	1.00±0.20
CS25	3.38±0.10	6.68±0.10	12.0±0.30		5.5±0.10	4.00±0.10			1.55+0.05	1.45±0.20
CS37	2.50±0.20	4.45±0.20	12.0±0.30	1.75±0.01	5.5±0.05	4.00±0.05			1.50+0.10	1.50±0.10
CS75	2.50±0.20	8.30±0.20	16.0±0.30		7.8±0.05	4.00±0.05			1.50+0.10	1.50±0.10

■ DERATING CURVE



■ ORDERING PROCEDURE EXAMPLE

CS 12 — Model #

F — Resistance Tolerance
J: ±5%
G: ±2%
F: ±1%

T — Packaging
T: Taping Reel
B: Bulk

G — TCR
E: ±100ppm
K: ±150ppm
F: ±200ppm
G: ±300ppm
H: ±400ppm
I: ±500ppm
J: ±600ppm

U — Power Rating
R: 3W
S: 2W
A: 1.5W
T: 1W
Q: 3/4W
U: 1/2W
V: 1/4W
W: 1/8W
X: 1/10W
Y: 1/16W
Z: 1/32W

R100Ω — Resistance
R010: 0.010Ω
R100: 0.100Ω
1R00: 1.000Ω

N — Marking
None: Standard
N: No Marking