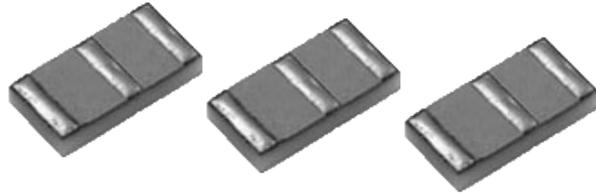


## High Precision Bulk Metal® Foil Surface Mount Voltage Divider

**TCR Tracking of <0.5 ppm/°C, Tolerance Match of 0.01% and Stability of ±0.005% (50 ppm)**

**FEATURES**

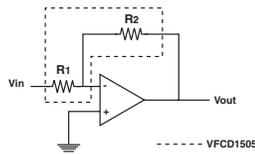
- Temperature coefficient of resistance (TCR):  
 Absolute:  
 ±0.05 ppm/°C (typical 0°C to +60°C)  
 ±0.2 ppm/°C (typical -55°C to +125°C, +25°C ref.)  
 Tracking:  
 0.1 ppm/°C typical
- Resistance range: 1K to 10K
- Power coefficient tracking: "ΔR due to self heating"  
 5 ppm at rated power
- Short time overload: ±0.005%
- Tolerance: absolute and resistance ratio: to 0.01%
- Load life stability (0.1 W at 70°C, 2000 h)  
 Absolute: 0.01%  
 Ratio: 0.005%
- Power rating at 70°C:  
 entire package: 0.1 W, divided between the two resistors proportionally to their value



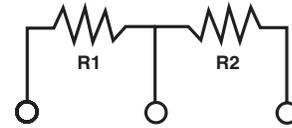
Bottom View



**RoHS\***  
COMPLIANT



**SCHEMATIC**



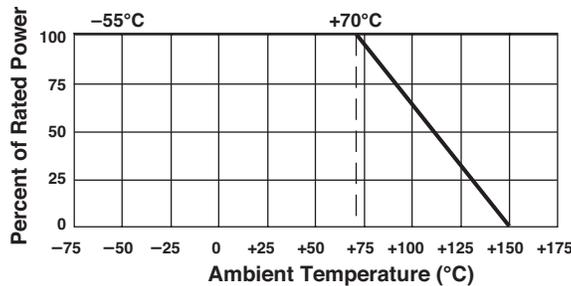
**RESISTANCE VALUES/RATIO AND TCR CHARACTERISTICS**

POPULAR VALUES	VCODES	ABSOLUTE TCR (-55°C TO +125°C, +25°C REF.)		TCR TRACKING		TOLERANCE MATCHING
		TYPICAL	MAXIMUM	TYPICAL	MAXIMUM	
10K/10K	V0001	±0.2 ppm/°C	±1 ppm/°C	0.1 ppm/°C	0.5 ppm/°C	0.01%
5K/5K	V0002					
1K/1K	V0004					
2K/2K	V0059					
5K/10K	V0005	±0.2 ppm/°C	±1 ppm/°C	0.4 ppm/°C	1.0 ppm/°C	0.01%
2.5K/10K	V0060	±0.2 ppm/°C	±1 ppm/°C	0.4 ppm/°C	1.0 ppm/°C	0.02%
1K/9K	V0056					
1K/10K	V0064					

**Note**

- Additional ratios are available.

**POWER DERATING CURVE**

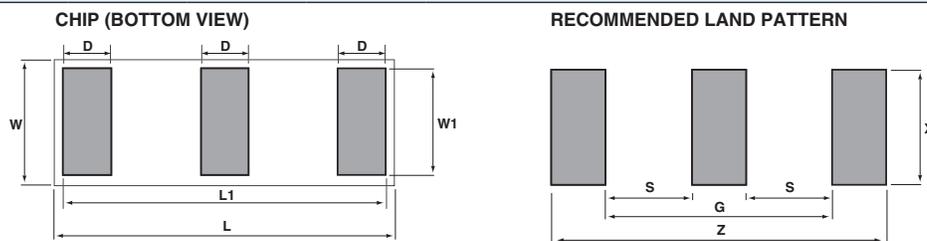


TYPICAL PERFORMANCE SPECIFICATIONS		
TEST	MIL-PRF-55342H CHARACTERISTIC E ΔR LIMITS <sup>(1)</sup>	VFCD1505 ΔRATIO
Thermal shock	0.10%	0.005% (50 ppm)
Low temperature operation	0.10%	0.005% (50 ppm)
Short time overload	0.10%	0.005% (50 ppm)
High temperature exposure	0.10%	0.01% (100 ppm)
Resistance to soldering heat	0.20%	0.01% (100 ppm)
Moisture resistance	0.20%	0.005% (50 ppm)
Load life (ratio stability)	-	0.005% (50 ppm)
Maximum working voltage for each element	22 V	
Weight	10 mg	
Packaging	Waffle pack standard, tape and reel available	

**Note**

<sup>(1)</sup> ΔR's plus additional 0.01 Ω for measurement error

## MODEL VFCD1505 DIMENSIONS AND LAND PATTERN in inches (millimeters)



**Note:** Recommended stencil thickness 0.2 mm/0.00787 inch minimum

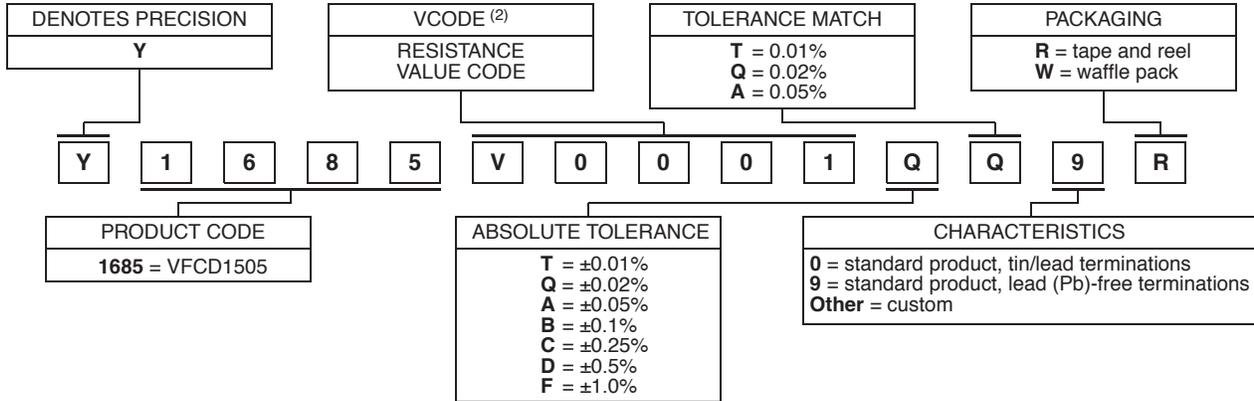
L	W	D	L1	W1	THICKNESS MAXIMUM	Z	G	S	X
±0.005 (0.13)	±0.005 (0.13)	±0.003 (0.08)	±0.003 (0.08)	±0.005 (0.13)		±0.003 (0.08)	±0.003 (0.08)	±0.003 (0.08)	±0.003 (0.08)
0.150 (3.81)	0.050 (1.27)	0.015 (0.38)	0.144 (3.66)	0.043 (1.09)	0.025 (0.64)	0.147 (3.73)	0.111 (2.82)	0.046 (1.17)	0.046 (1.17)

**Notes**

- Avoid the use of cleaning agents which could attack epoxy resins, which form part of the resistor construction
- Vacuum pick up is recommended for handling
- Soldering iron is not applicable

**GLOBAL PART NUMBER INFORMATION<sup>(1)</sup>**

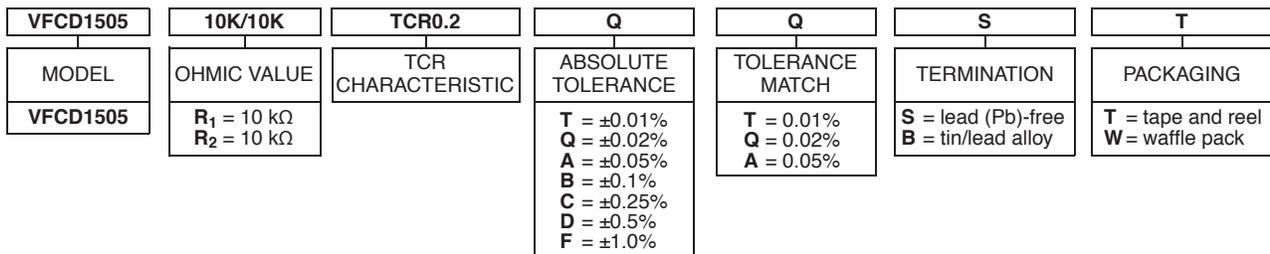
**NEW GLOBAL PART NUMBER: Y1685V0001QQ9R (preferred part number format)**



FOR EXAMPLE: ABOVE GLOBAL ORDER Y1685 V0001 Q Q 9 R:

TYPE: VFCD1505  
 VALUES: 10K/10K  
 ABSOLUTE TOLERANCE: ±0.02%  
 TOLERANCE MATCH: 0.02%  
 TERMINATION: lead (Pb)-free  
 PACKAGING: tape and reel

**HISTORICAL PART NUMBER: VFCD1505 10K/10K TCR0.2 Q Q S T (will continue to be used)**



**Note**

- <sup>(1)</sup> For non-standard requests, please contact application engineering
- <sup>(2)</sup> For examples of VCODES see Resistance Values/Ratio and TCR Characteristics table